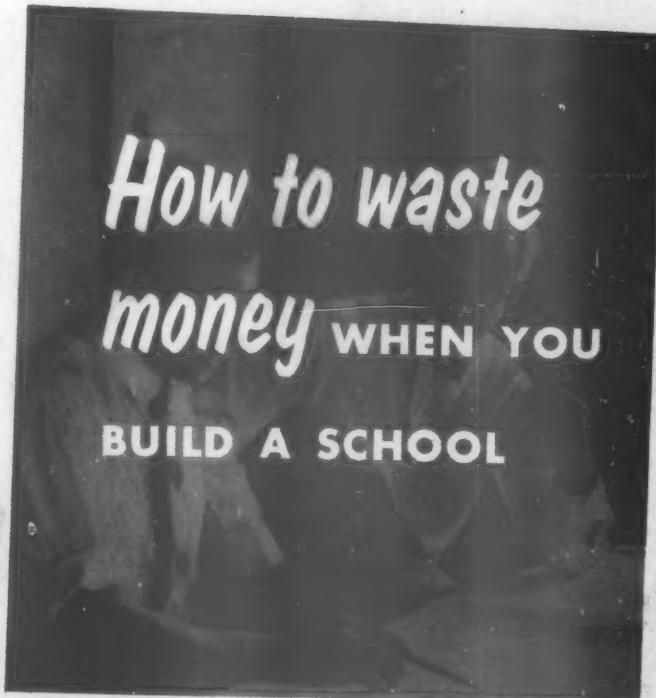
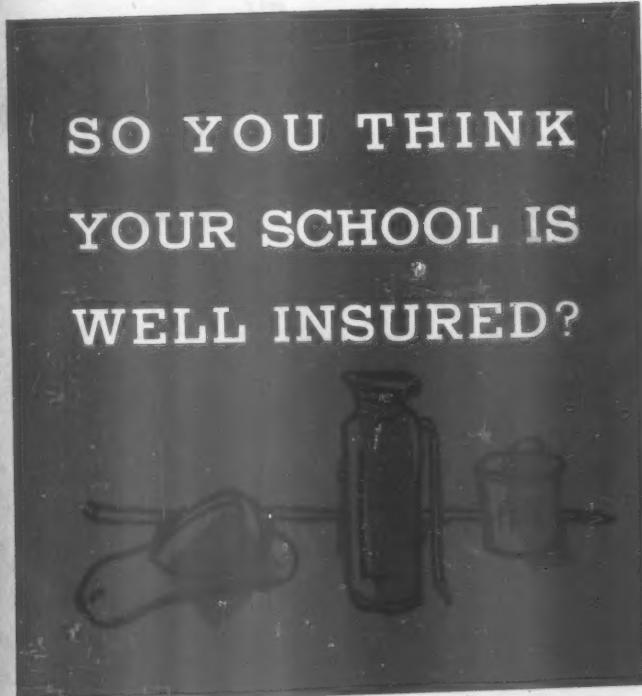
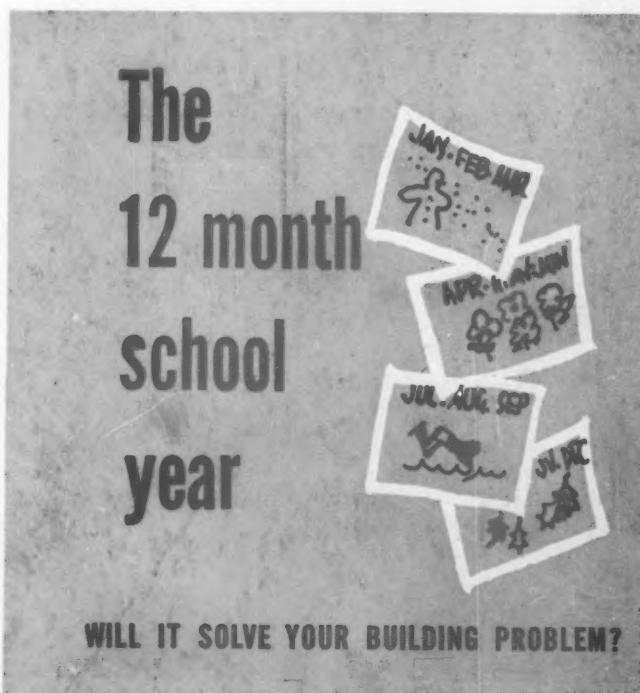
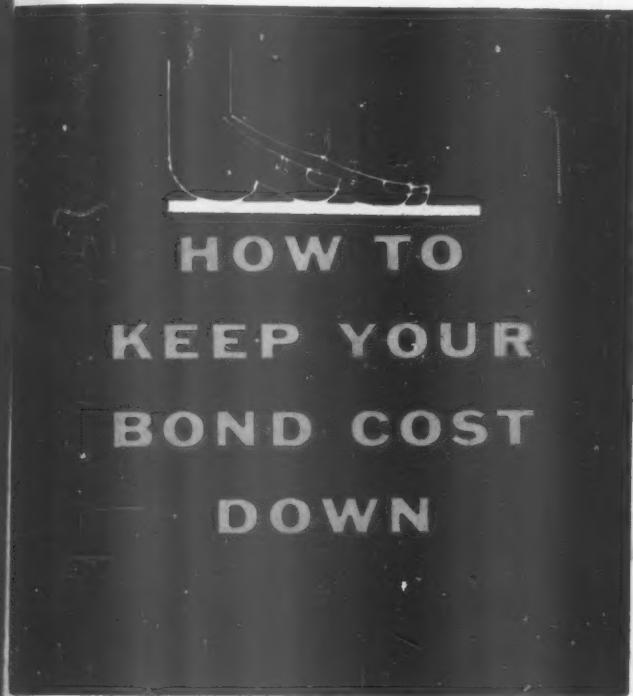
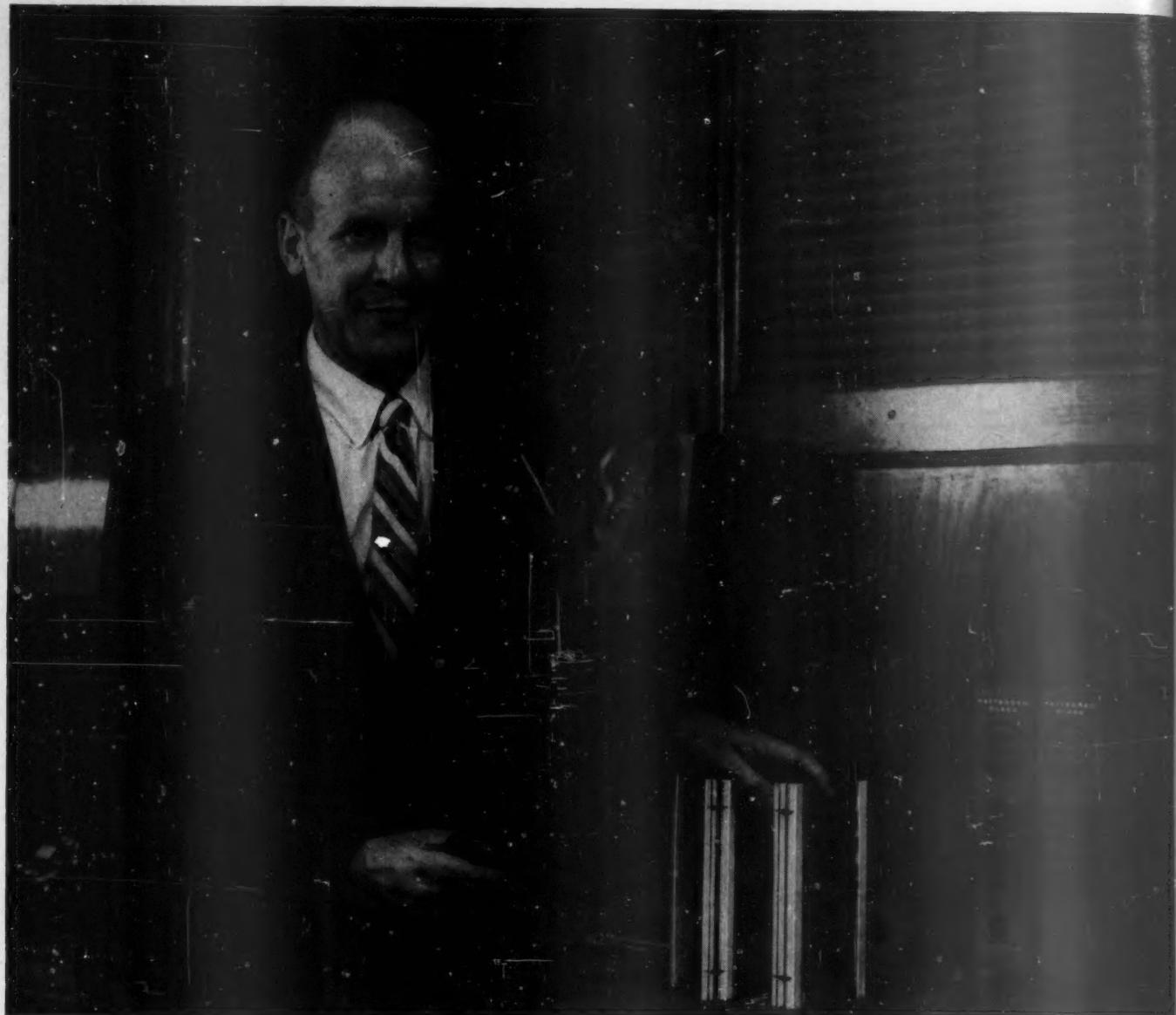


# SCHOOL MANAGEMENT

PRACTICAL SOLUTIONS TO SCHOOL MANAGEMENT PROBLEMS



SEE COMPLETE CONTENTS ON PAGE 5



# Hello!

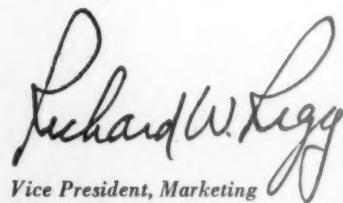
Helping your business is much of our business, so let's get acquainted.

You see, we make glass . . . special kinds of glass that architects have specified and recommended for school applications for many years.

We would like you to know more about Blue Ridge Glass and what it can do for your schools. Now, thanks to the birth of *School Management*, we can.

In future issues, for instance, we'll tell you about a glass that filters daylight to relieve eyestrain . . . colorful glass for curtain-wall spandrels . . . glass that pro-

vides privacy while transmitting light . . . heat tempered glass and fire-retardant wired glass that safeguard students. For these and other *creative ideas in glass*, won't you look for us in following issues? Thank you.

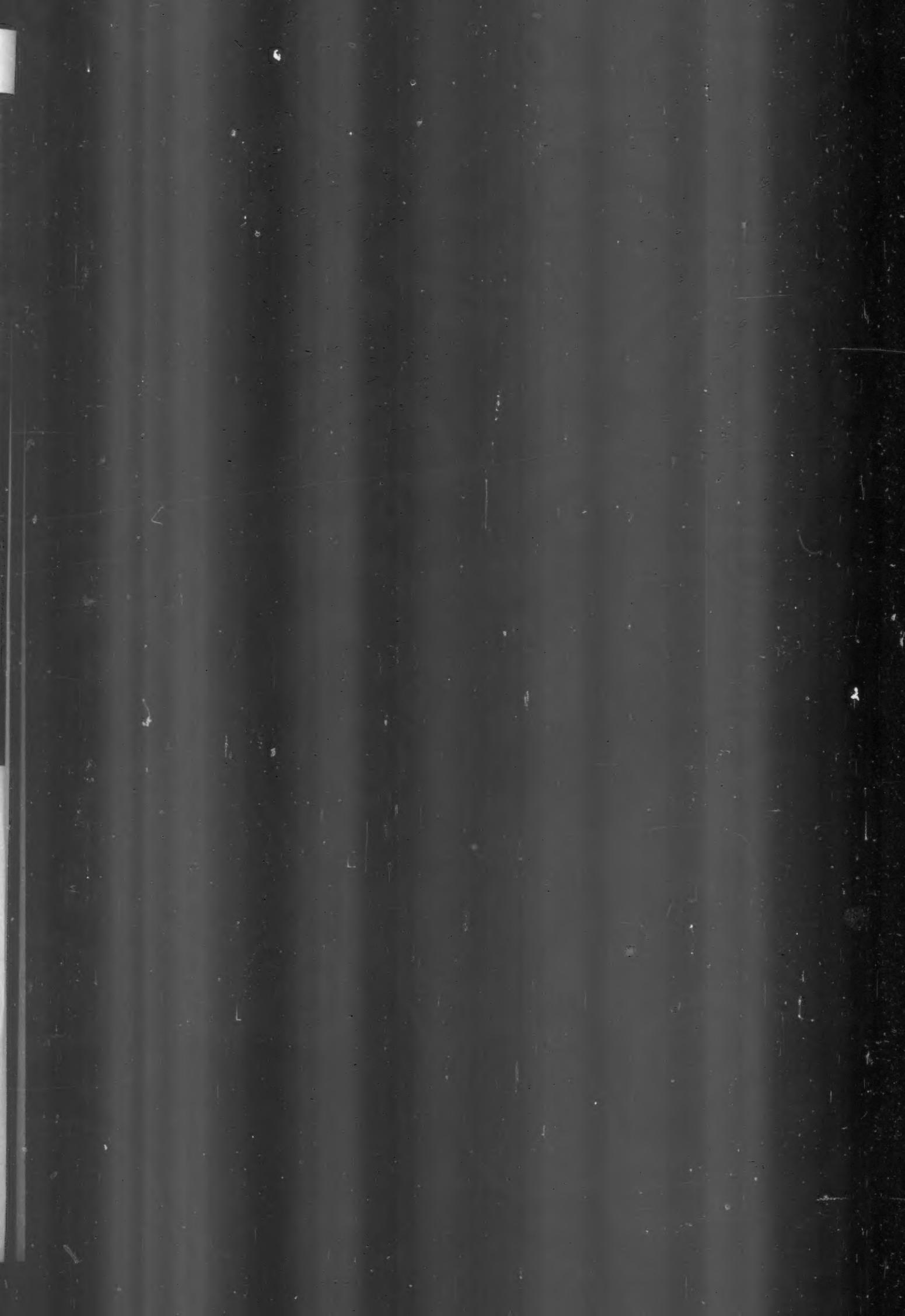


*Vice President, Marketing*

**Blue Ridge Glass Corporation, Kingsport, Tenn.**

*Blue Ridge Architectural Glass is sold through  
Libbey-Owens-Ford Glass Distributors*

(Circle number 101 for more information)





22 West Putnam Avenue, Greenwich, Connecticut • Townsend 9-8585

962  
8886

**SCHOOL**  
*new*  
**MANAGEMENT**

*Jerome W. Harris  
Editor and Publisher*

August 9, 1957

Dear Reader:

You hold in your hands one of the first issues of a new magazine.

Since you have never seen it before, and since you didn't subscribe to it, we think you will be interested in the answers to the following questions:

1. How much does it cost?

The answer is "nothing." You have been selected to receive a complimentary subscription because of your duties as a school official. For details as to how we obtained your name, please see page 9.

2. What is its purpose?

We can answer this best with some examples: If you are a farmer, you probably read a farm magazine to help you with your business. If you are an advertising man, you read an advertising "trade magazine." If you are a doctor, you read a medical journal. SCHOOL MANAGEMENT is a magazine for school managers. We hope to bring you factual, down-to-earth information that will help you improve your schools.

3. Does it have an axe to grind?

The answer is "no". This is not a magazine of opinion. It is not designed for any special group. Instead, it treats all school officials, whatever their titles, as school managers. In this respect, it is a team magazine -- for administrators, school board members, business managers, and government officials.

4. Who are the publishers?

The same group that publishes MANAGEMENT METHODS Magazine are "behind" SCHOOL MANAGEMENT. This former

(over)

magazine is read, each month, by over 50,000 top management men in large American business firms. Its purpose is to do for business managers what SCHOOL MANAGEMENT is designed to do for school managers -- bring them practical solutions to managerial problems.

5. Will I eventually be asked to pay?

For so long as you are a bona fide school official, your subscription will be free. We will ask you to help us occasionally, however. One such opportunity exists in this issue. On the opposite page there is a survey questionnaire on school buying patterns. It will be of material help to us, if you will give us your answers. You will not be personally identified with your answers -- in fact, you aren't even asked to sign your name.

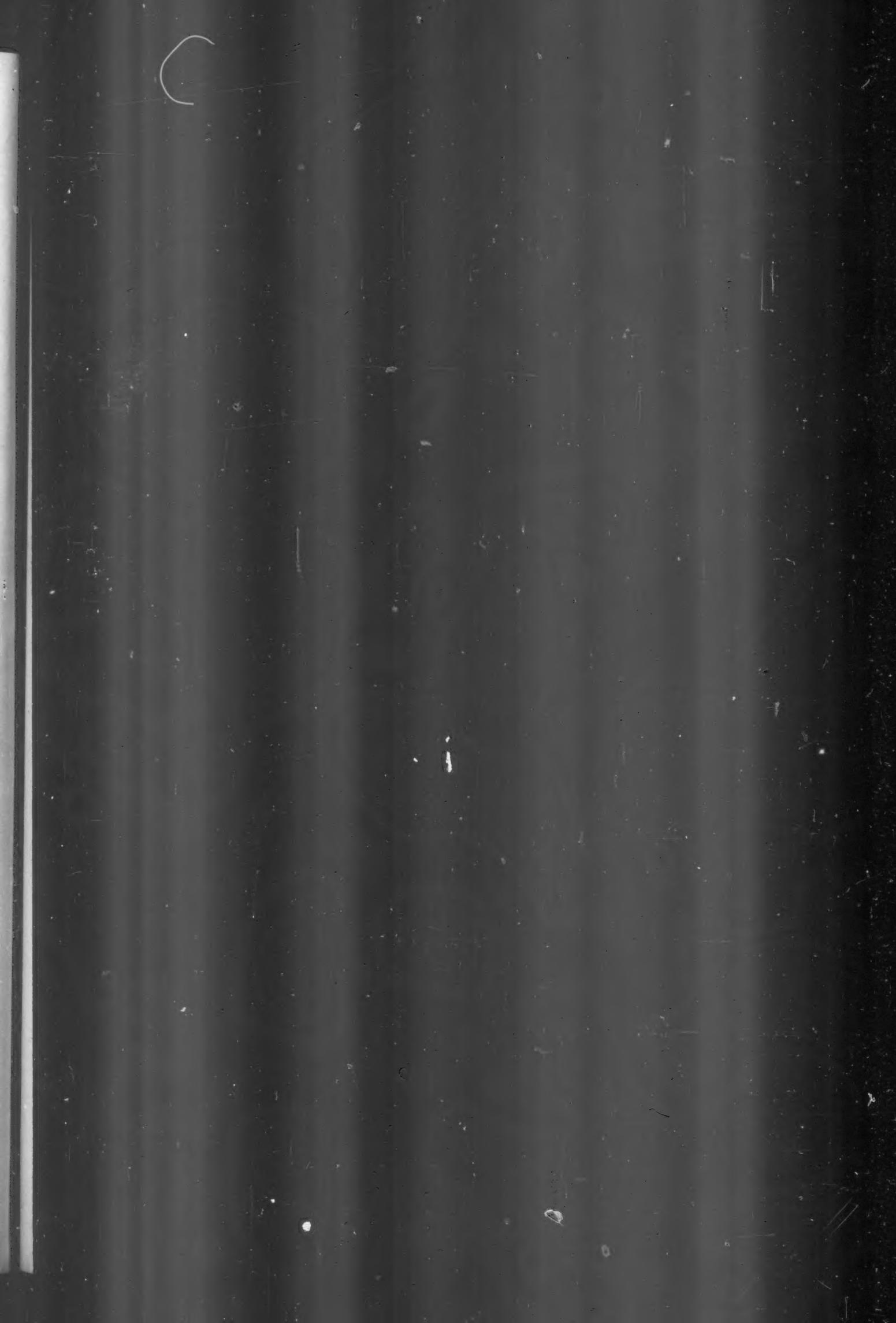
One more point. We would like to have your opinion of SCHOOL MANAGEMENT after you have had a chance to read it. A few words of comment will do. You may use the postage-paid reply card, bound in this issue, for that purpose.

Cordially yours

*J.W. Harris*

P. S. Instructions for the questionnaire on the opposite page.

It will take you about three minutes to give us your answers. Questions can be answered with a check mark. Please try to answer every question. When you have finished, tear along the dotted line, fold as indicated, and put it in the mail promptly. No postage is needed, and the sheet is self-addressed. We'll publish the results within 60 days so you can compare your practices with those of other school districts.







# Safeguarding America's Future!

As a school official, you have a direct responsibility in the most important job in the world—the job of safeguarding America's future—our children. Wayne is proud to be helping in this work by producing the world's safest school bus bodies.

Advanced Wayne School Buses bring you a record-breaking number of "safety firsts"—a whole new concept in passenger security. Never before have school coaches provided such excellent visibility for accident prevention and such strong construction for impact re-

sistance. Feature after feature is designed to provide greatest driving safety and passenger protection.

In 1892 Wayne built America's first horse-drawn "kid hack" . . . in 1914 Wayne produced the first motor powered school bus . . . in 1930 Wayne designed the first all-steel school bus . . . and today, as in the past, Wayne School Buses are far in the lead.

Take no chances. Put yourself above criticism. Choose Wayne School Buses—America's Safest Way to Go to School.

*Note: Top photo shows students on field trip to Wright-Patterson Air Force Base, Ohio*



## TREND-MAKER OF THE SCHOOL COACHES

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Richmond, Indiana



(Circle number 102 for more information)

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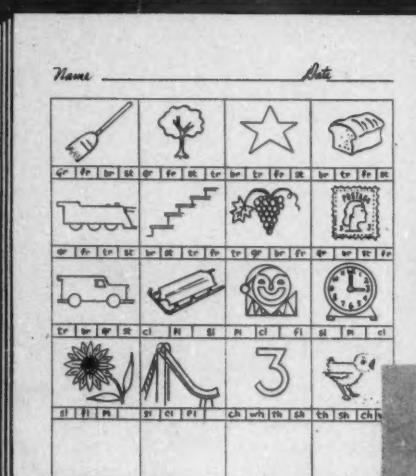
No longer does mimeographing limit you to simple lines or when it comes to drawing, drawing, drawing.

Now you can quickly have fast mimeographed messages with extensive illustrations, maps, diagrams, charts, photos or products. You don't even have to prepare the stencil—it's there for you to use.

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12. Design in Textbooks



# Schools never had a mimeograph like this!

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School \_\_\_\_\_

Address \_\_\_\_\_

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**A·B·DICK®**  
DUPLICATING PRODUCTS

(Circle number 103 for more information)

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# New Cincinnati Schools Have Modern Sanitary Wash Fixtures, too



**BRADLEY**  
washfountains

- James N. Gamble Junior High School. Architects, Felsberg & Gillespie.
- Louis Schwab Junior High School. Architects, Elliston, Hall, McAllister and Stockwell.
- Robert A. Taft Senior High School. Architects, Tietig & Lee.

At left: Bradley Semi-Circular Wall-Type Washfountains located in classroom of James N. Gamble Junior High School.

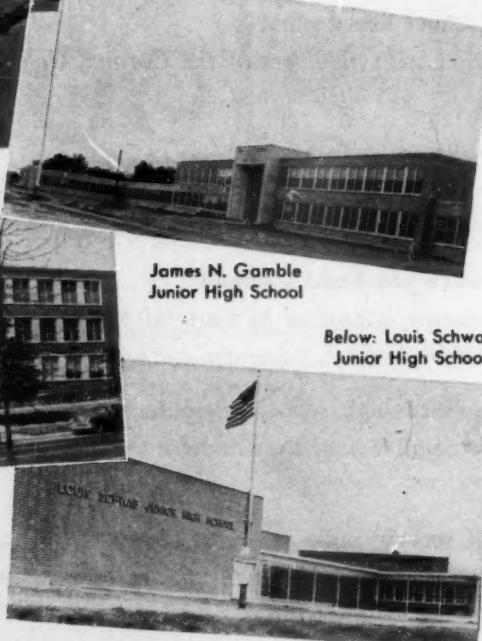


Robert A. Taft Senior High School

- In the design of these three latest Cincinnati school buildings, the best in modern wash fixtures were included.

Bradleys—in main washrooms, in corridors or alcoves, in classrooms, laboratories, art rooms—provide the maximum in sanitary, easy to clean washing facilities.

You will find more about the self-flushing bowls, convenient foot-control that eliminates faucets, how space is saved and other features in Catalog 5601, a copy of which is yours for the asking. **BRADLEY WASHFOUNTAIN CO., 2343 W. Michigan Street, Milwaukee 1, Wis.**



James N. Gamble Junior High School

Below: Louis Schwab Junior High School



## SCHOOL MANAGEMENT

22 West Putnam Ave., Greenwich, Conn.

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**President**  
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SCHOOL MANAGEMENT

# 4 Reasons Why... more and more schools are installing AETNA DRIVOTRAINERS



## Students Like It —

In New York City Schools where Drivetrainers are installed over 90% of the students said that the Drivotrainer helped them to develop good judgment, good sportsmanship and gave them experience handling emergency situations. 97% of the students in Los Angeles Drivotrainer classes concurred.



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## Parents Like It —

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## Administrators and School Boards Like It —

Administrators and School Boards of schools where Drivetrainers have been installed have found that they were able to train up to 50% more pupils with the same teaching staff and at savings up to 30% in costs.

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**COLORADO** Colorado Springs  
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**ILLINOIS** Oak Park

**INDIANA** Fort Wayne

**IOWA** Cedar Falls  
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Des Moines  
Davenport  
Mason City  
Waterloo

**MICHIGAN** Dearborn  
East Lansing  
Lansing

**MISSOURI** Ferguson  
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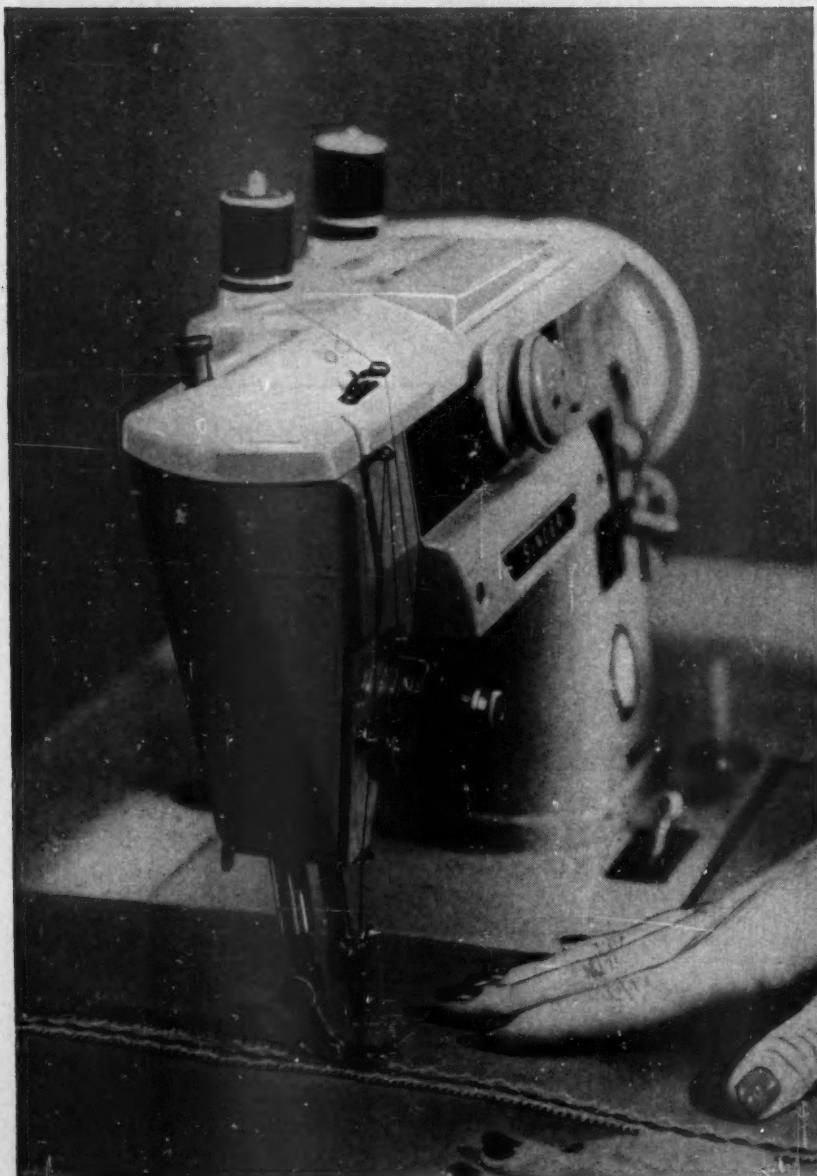
The finest sewing machine ever built for home or school use

**Dramatically new and different** in every way, the SINGER\* Slant-O-Matic outsews any other machine for both straight and fancy stitching.

It's the most durable automatic zigzag machine you can buy, mechanically perfected for years of service-free operation. With unmatched ease and beauty, it sews on the finest to the most rugged of fabrics without slipping or stalling.

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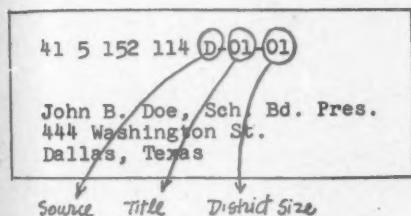
SCHOOL MANAGEMENT

# How your name got on SCHOOL MANAGEMENT'S mailing list

■ ■ ■ IF YOU WILL GLANCE at the little address sticker on the wrapper for this issue, you will find a "code line" that tells some important facts about you. That code is our way of remembering your title as a school official, the size of your school district, and where we got your name.

Before we go any further, maybe you would like to check on our accuracy. Every effort has been made to be absolutely sure of our facts, but human transcription error always creeps in. If we have made a mistake, we hope you will take the time to correct us on the reply-paid postcard bound into this issue.

Here's how it works . . .



The "D" stands for Western Union, which obtained your name for us (we'll tell you how later).

The "02" is the code for your title as a school official. The "03" indicates the number of pupils in your district. If you will use the chart below, on this page, you will be able to check our accuracy.

## Why your name is on our list

If you have thumbed through SCHOOL MANAGEMENT, you have probably noticed that our articles are devoted to describing practical ways to improve school administration. There's no "educational theory"—and there's very little material about "teaching methods."

Of course, every school official is also an "educator," but in this magazine we are primarily concerned with your responsibilities to provide leadership and policy direction in your school district.

When we decided to publish SCHOOL MANAGEMENT, we learned that there were about 50,000 operating school districts in the United States. When we dug a little deeper, we were surprised to discover that only about 11,000 of these districts had more than 300 pupils. We were even more surprised to learn that only 4700 had more than 1200.

We realized right then, that our magazine would have only minor value to a school official in a district with fewer than 300 school children. We decided to concentrate on the larger districts, devoting our editorial space to their interests and problems.

## How we got your name

Through the Bureau of the Census, we obtained a list of all the school districts with more than 300 pupils. Next, we gave this list to Western Union and asked them, through their 2,000 offices, to make personal phone calls for us to each district office. We asked them to get the name and address of the top professional administrator in each district, the name of the business manager, and the name and *home* address of the president and three members of the school board.

Your name and address was included among those Western Union delivered to us.

But not every name we received will get a copy of this issue of SCHOOL MANAGEMENT. This first issue is directed only to administrators, business managers, and

## SCHOOL MANAGEMENT CODING

### TITLE

- 1 Presidents & Chairman of the Board
- 2 Members of the Board of Education
- 3 City, Intermediate & State public school superintendents & chief public school administrators of other basic local school districts.
- 4 Public School business officials, including also assistant superintendents & deputy superintendents in charge of business and/or purchasing agents or superintendents of buildings & grounds.
- 5 Assistant superintendents not included in Number 4, supervisors & department heads in city, inter-

mediate, state & federal administration units. (*At local level*)

6 Same as above (*At intermediate, state and federal level*)

7 Residential & private schools administrator: (*Private schools including both residential & country day*)

8 Same as above (*Parochial schools including also diocesan departments of education including their superintendents, assistant superintendents & supervisors*)

9 Administrators in Colleges, Universities & normal schools

10 Schoolhouse architects & consulting engineers

### SIZE OF DISTRICT

01—25,000 or more pupils

02—12,000 to 24,999 "

03—6,000 to 11,999 "

04—3,000 to 5,999 "

05—1,200 to 2,999 "

06—600 to 1,199 "

07—300 to 599 "

*Fenestra*

SCHOOL DESIGN  
NEWS

## LOOK WHAT FENESTRA WINDOWS DO FOR MODERN SCHOOL DESIGNS!

Fenestra® Intermediate Steel Windows are selected by architects and school officials for many of the finest and best-looking schools in America. The reason is not appearance alone.

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You get *better ventilation*, too. Project-out vents form weather-protective canopies over the openings. Tilt-in vents bring in abundant fresh air *without drafts* . . . shed rain outside. All vents open smoothly and easily with a finger touch.

You save on maintenance. Sturdy hardware and steel-strong window members assure years of

trouble-free service. Cleaning and screening are done safely and economically *from the inside!*

### New Fenestra FENLITE Finish

Fenestra Intermediate Windows are now available with the New FENLITE Finish that gives longer window life *without painting* plus a distinctive new window beauty. The FENLITE process is an exclusive Fenestra development based on years of experience and research with corrosion-resistant finishes for steel windows. It saves you the cost of maintenance painting year after year.

*Inside and out*, Fenestra Intermediate Steel Windows give your schools modern window beauty, more daylighting and better ventilation. Specify them for your new school buildings. Mail the coupon, today, for complete information or call your local Fenestra representative — listed in the Yellow Pages of your telephone directory.





Sam Houston Elementary School, Port Arthur, Texas, features Fenestra Intermediate Steel Windows. This outstanding school demonstrates the functional beauty of their slim, modern design and the pleasant classroom atmosphere created by their better daylighting and ventilation. Associated Architects: Caudill, Rowlett, Scott & Associates, Bryan, Texas; Oklahoma City, and J. Earle Neff, Port Arthur, Texas. Contractor: Schneider Construction Co., Houston, Texas.

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SCHOOL \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

(Circle number 107 for more information)



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• SALES AND SERVICE IN PRINCIPAL CITIES

school board presidents. Starting in October, the full list of 50,000 names will receive our magazine regularly—without charge.

### Why you don't have to pay

You may well wonder why we aren't going to ask you to pay for this magazine, particularly since it is edited specifically for your interests. Frankly, we don't think you would subscribe to it. As a busy man, you have enough to do—and read—without adding to your work load. We thought you might not realize why **SCHOOL MANAGEMENT** would lighten your work load.

The history of most magazines in this field bears out this line of thought. Their circulation among administrators and school board members has never risen to a point where they could materially help a broad segment of the country's school districts. We believe school officials do not subscribe to them, in great numbers, because they serve no useful purpose for men seeking *administrative* information. Thus, any new magazine entering this field is tarred with the same brush in the minds of its would-be subscribers.

### For example . . .

To make this point clear, let's take our treatment of the much-discussed 12-month school year. You'll find the article on page 22. It's possible to approach this year-round school idea from two points of view: as an *educational* problem, or as a *management* problem. We chose the latter.

Our emphasis is on the *policy-making* aspect of this idea, and we have tried to present all of the facts you need to make a management decision. This does not mean we have ignored the purely educational aspects, for they are part of your problem, too. *But only a part.* We have tried to bring you, with facts, all of the important financial, administrative, and educational aspects of year-round schooling.

You will have to be the judge of whether we have accomplished our purpose. For, while you will continue to receive **SCHOOL MANAGEMENT** "free", we are actually asking you to pay with a price that is even more costly than a subscription fee—*your time*.

SCHOOL MANAGEMENT

# Are we ready to... *air condition* our school rooms?



## which way comfort?

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*Mainline* System

Year'round Air Conditioners:

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for classrooms

*Roommate* for offices

*AudiCon* for auditoriums

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Nesbitt Cabinet Heater

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**Are school boards ready?** While many schools have not yet installed an adequate system of heating and cooling by controlled ventilation, many others find such protection indispensable—and even think of adding mechanical refrigeration for cooling at certain times of year. Needs vary in different parts of the country; but wherever school buildings are to be used all year round—and in areas where outside temperatures are often above 60° during the normal school term—a complete system of heating, ventilating, natural cooling, and air conditioning is the only assurance of a comfortable learning environment at all times. Therefore many school executives and board members are giving serious thought to air conditioning in tomorrow's schools.

**Are taxpayers and bondholders ready?** The people who supply the money for public education will have many questions about the cost of installing and operating year-round air conditioning, but the facts will be weighed against the benefits to students and community.

**Are architects and engineers ready?** Is contemporary school building design well suited to the employment of summer air conditioning? What effect upon design will the growing desire for year-round comfort protection have? How best design the system—for installation all at once or in successive stages?

**IS NESBITT READY?** With more than a quarter-century of experience in the manufacture of air conditioning components, Nesbitt is prepared to offer its Year'round Air Conditioners (*Syncretizer* and *Mainliner* for classrooms; *Roommate* for offices; and *AudiCon* for auditoriums). All Nesbitt Year'round units may be installed initially for heating and cooling by controlled ventilation, and the summer cooling components may be added later.

**Are you ready?** Whatever your relation to the school field, you probably have questions: What is involved in air conditioning a school? What are the initial and the operating costs? What must be considered before deciding to install controlled ventilation now and mechanical refrigeration later? These and many other questions are answered in the treatise by Nesbitt engineers, "An Analysis of Air Conditioning for Schools." Mail this coupon for your free copy.

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It can be provided initially or at any future time. When it is wanted, air conditioning can be secured without disruption . . . and without expensive alteration and installation charges.

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HerNel-Cool II units provide individual temperature control for each room, automatically. Most of the year they provide heat, ventilation, or natural cooling (with outside air) as the room requires. When a chiller is installed in the boiler room, HerNel-Cool II units also function as air conditioners.

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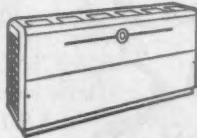
Would you like more information? Just write to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., Louisville 8, Kentucky.

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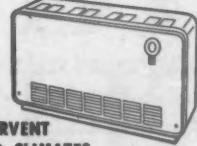
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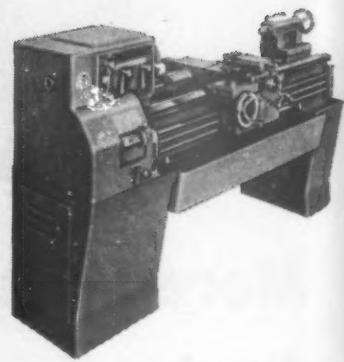


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*A digest of current happenings in public education*

### Don't ask for money without preparing the public

After taking a bad beating in a recent bond election, school officials in Chappaqua, New York, have taken a long backward look and think they know why they lost. Their conclusion: too much haste in bringing their bond issue to a vote.

At stake was a \$333,000 request for the purchase of two sites for future schools and for facilities and equipment at the \$2 million high school now under construction. District Principal Douglas G. Graffin says, "We were foolish to tie the three propositions together, and foolish to rush the issue to a vote." Mr. Graffin also feels it was unwise to include the cost of athletic fields in funds sought for school equipment. He says more care will be taken in the future in framing proposals, and that public hearings will be held on them before the district tries to get legislative action.

### 12-month school year

At the recent Conference of State Governors, the idea of the year-round school found heavy support. The coming months can expect to be filled with many learned—and not so learned—reports on the idea. To help keep things in focus, the opening article in this issue of *s/m* presents the two sides to the story. See "The 12-month school year—will it solve your building problem?" on page 22.

### Too little insurance

Last June, a Massachusetts jury brought in an award of \$72,500 against the owners of six buses which transported school children in a community in that state. The contractor had carried only the statutory limit of \$5,000 per person and \$50,000 per accident. The insurance was inadequate to pay the judgment and

the bus owner was forced to go out of business. A leading newspaper, editorializing on this case, called for prompt legislative action to increase the statutory limit. Under the act as it now stands, few school bus owners carry adequate insurance.

This isn't the only area where schools have inadequate protection. For details on inadequate fire insurance, see the story on page 32 of this issue "So you think your school is well insured?"

### To get better science teachers

The Board of Education of New York City recently finished an experiment to produce better science teachers for junior high schools. Eighteen groups of twenty teachers each—a total of 360 teachers in all—took special science courses. The idea behind the courses was to give these teachers experience in handling scientific materials and apparatus.

Until recently, most of these 360 teachers were so-called "permanent" substitutes. They held regular classroom assignments, but for a variety of reasons, didn't have a regular teaching license. Then, they answered an appeal made by the board of education to relieve an acute shortage of qualified science teachers in junior high schools. The courses involved 30-hours of study and five sessions of concentrated laboratory work.

If this experiment proves successful, it will be repeated, and may well answer part of New York City's teacher shortage.

### Painless paperwork

When it's hard to hire help, people just naturally turn to machines. That's what happened in the business world during and after World War II. Now our schools are "automating." Out of Whittier, California, comes a report of a fully-automated

school office. According to Superintendent C. H. Wennerberg, it used to take most of the summer to process registrations for the Fall semester, and administrative work took up the first week or two of the school year.

"Now," says he, "instruction begins within an hour after the students come to school." A punched card system does the trick.

Deputy Superintendent H. H. Holloway reports another use for the machines. He recalls that a few years back the results of I.Q. tests given in September did not reach the teachers until the next May. Now, he says faculty members get first findings before the Christmas vacation, in time to be of real value.

For a down-to-earth explanation of how the system works in a different school district, see page 40 in this issue for the story "Look How They've Simplified High School Scheduling."

### Legality of state association

In case you missed it, the following item from a recent issue of the Massachusetts Association of School Committees Newsletter is worth repeating:

"During the past year the Colorado State Athletic Association has been under indictment and faced with the decision of a lower court that the organization was in conflict with the state constitution in its assumption of authority over its member schools in the control and regulation of interschool activities—particularly athletics.

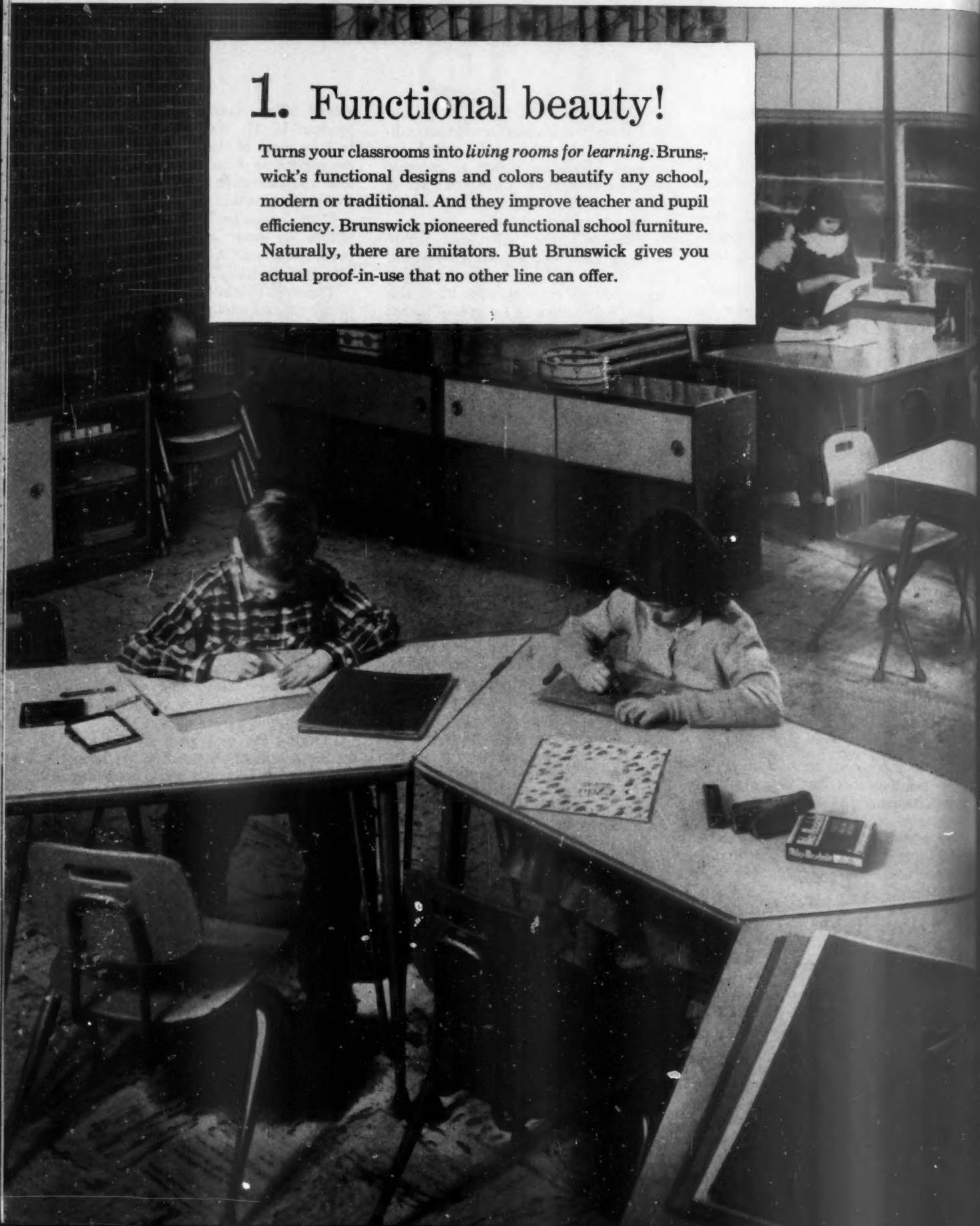
"The action against the state association was originated by a broadcasting company which denied the right of a school to make a charge for broadcasting privileges. The question of the general legal rights and standing of the state organization was involved.

"The lower court's decision was to the effect that a school may legally charge for broadcasting a school event, but that the state association was in conflict with the state constitution—that taking membership in it

# 4 reasons why more and more school authorities are buying Brunswick

## 1. Functional beauty!

Turns your classrooms into *living rooms for learning*. Brunswick's functional designs and colors beautify any school, modern or traditional. And they improve teacher and pupil efficiency. Brunswick pioneered functional school furniture. Naturally, there are imitators. But Brunswick gives you actual proof-in-use that no other line can offer.



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Extends throughout the life of your Brunswick equipment! Your representative helps you plan every installation in exact detail . . . from school furniture to folding gym equipment. His service *begins*, not ends, with the sale. He is always on call when needed. And he is backed by Brunswick dependability that has been famous for 112 years.

## 3. Rugged construction!

Means many more years of trouble-free use! The sand bag test above is one of many that Brunswick Furniture must withstand. They demonstrate Brunswick's many construction, engineering and quality features. Ask your representative to explain them all. And talk to friends using Brunswick. They'll tell you Brunswick is your best investment!

Sales figures show that more school authorities are changing to Brunswick than to any other line. Four excellent reasons are shown on these pages. And there are others. One is Brunswick's fast, dependable delivery. Another is the way Brunswick stands 100% behind every piece of equipment sold. A third is that Brunswick offers the *widest* line. You can get all your needs from one dependable source. They all add up to *quality* . . . your best investment in the long run.

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**Here's how it works.** To make it easy for you, and to simplify handling at our end, we have placed a "key number" under every advertisement and many of the editorial items in this issue. These key numbers are also listed on our reader-service card. Circle the key number of items that interest you and fill in your name and address. We'll respond as quickly as possible.

**JUST CIRCLE FOR MORE INFORMATION**

amounted to giving up control of educational activities by the school board, and that it was an illegal donation for a school to pay dues in a state association.

The supreme court affirmed the lower court's decision in regard to fees for broadcasting school events, but reversed its decision on the legal standing and authorities of the state association. Its decision stated that a school's joining of the state association was a public purpose and within the powers of the school.

"This is not the first instance of a decision by a state supreme court that a voluntary organization of schools in a state association may assume reasonable controls over the inter-school activities of its members, and adopt the penalties necessary to enforce them."

#### Business Officials to meet

The 43rd Annual Convention of the Association of School Business Officials will convene in New Orleans, October 20. Convention attendance of approximately 2,000, plus more than 100 exhibitors, is anticipated. For details, contact C. W. Foster, Executive Secretary, 1010 Church Street, Evanston, Illinois.

#### Watch state legislation

It pays to keep a sharp eye on legislation pending in your state capitol *before* you close your annual budget. School districts throughout New York state were hit hard this Spring, just after budgets were closed, by two school bills that involved costs they failed to provide for. One bill offered social security to teachers, allowing boards to make the coverage retroactive for four or six quarters. Teachers were given the option of collectively accepting or rejecting social security, but favorable votes (in most districts) forced school boards to put up the employer's contribution to match retroactive payments. Even in relatively small districts, the cost ran over \$100,000.

The other "sleeper" was a law requiring school boards to pay interest on money deducted from teachers' salaries for annuity and retirement funds. The districts formerly used this money throughout the year and totals due the retirement fund were deducted from state aid—without an interest charge. This cost will average \$8 per teacher each year in some districts. Few have provided for it in their budgets.



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THE IDEA IS SIMPLE: use your schools all year round, stagger vacations, and thus provide classrooms for one-third more pupils. Here are two conflicting views: an interview with a superintendent who has used the plan, and a special S/M report from Atlanta which found it too expensive.

■ ■ ■ ALL OVER THE COUNTRY, school boards are giving serious consideration to *any* plan that will relieve their classroom shortage. Wistfully, they speak of double shifts, double sessions, the 11-month school year and—most of all—the “year-round” program.

There is nothing new about these ideas. Double sessions are commonplace. The 11-month term, six days a week, was popular among colleges using the so-called “accelerated program” during World War

II. But it is the 12-month staggered-schedule idea that seems to be the most attractive today—perhaps because it is the least known quantity.

In an effort to fill in some of these gaps SCHOOL MANAGEMENT reports below an interview with Lytle M. Wilson who, as an elementary and junior high school principal, and finally as Superintendent, had over ten years experience with the 4-term system in the Aliquippa, Pennsylvania, schools.

## MAYBE says a man who used it



**Q. Mr. Wilson, why was the all-year school used in Aliquippa?**

**A.** It was instituted because the school district was unable to borrow sufficient money to satisfy its building requirements. In a period of 12 years, we grew from a small farming community with a school population of 114 pupils to a large industrial community with over 2,200 pupils. Eight years after that, we had 6,600 pupils. That's when we started the year-round plan.

**Q. In other words, you were forced into it?**

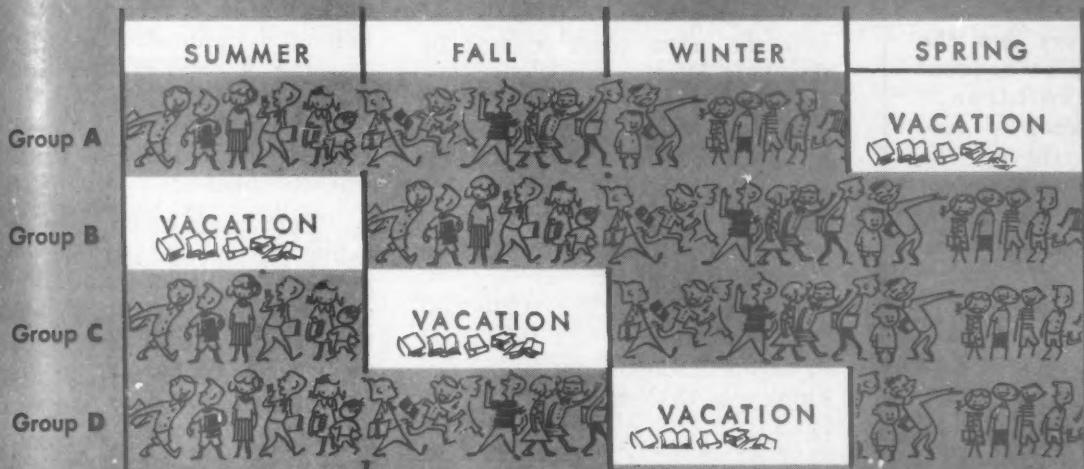
**A.** That's partially true. We had had half-day sessions and overcrowded classrooms. Things were going from bad to worse. But we

made careful studies and surveys before we launched it. I guess “forced” isn't a bad word, though. We were short 40 classrooms, and the borrowing capacity of the school district was less than half enough to finance the building of these rooms.

**Q. Was there much “grinding of gears” when you put the plan into effect?**

**A.** We started slowly. We inaugurated the plan in July in four schools where the shortage of space was most acute. Later on, the plan was extended to include all ten schools in Aliquippa. There wasn't too much “grinding of gears” as you call it.

## HOW IT WORKS



Each child attends school for three terms a year. Each term has 12 weeks. Everybody is on vacation for two weeks at the beginning of July. The other two weeks are for regular school holidays. School never really closes.

### Q. How did you organize to put the plan into effect?

A. Let me establish what the plan actually was, since a lot of people seem to be confused as to how it works. The plan in Aliquippa utilized the school buildings for school purposes for 48 weeks in the year. It provided all children with schooling for 180 days each year. In other words, an individual pupil didn't go to school year-round.

Each of the four quarters had 12 weeks—or 60 school days. Two weeks vacation for everyone was provided at the beginning of July of each year. Two additional weeks were utilized for the regular school holidays.

### Q. When did each of these four quarters begin?

A. The first, or Summer quarter of each year, began on or about July

15. The second or Fall quarter began on or about October 10. The third or Winter quarter began on or about January 15, and the fourth or Spring quarter began on or about April 15. These opening dates were chosen so that each quarter would fall into two different seasons of the year. Since children must attend school 180 days, each child remained on vacation one-quarter and attended school for three.

### Q. How were pupils promoted—how did you move them ahead?

A. Pupils were promoted regularly three times each year. The quarter symbols used for the class groups were "C", "B", "A" for the respective quarter periods which the pupils were enrolled in school. In other words, there were three terms or "semesters" to each student's school year.

### Q. How did you decide which pupils were to be assigned a given "starting" quarter?

A. You must remember that the distribution of the enrollment was made so that three-fourths of the children were in school and one fourth were on vacation, during each quarter of the year. We were out to relieve over-crowding, so there was no great science to the selection. The pupils were more or less arbitrarily assigned to school and vacation periods at the beginning of the all-year organization.

### Q. Did any children go to school all four quarters?

A. When a parent requested that a pupil remain in school for four quarters, we granted it if available space and the factors involved seemed to justify making the exception. Actually, there were compara-

tively few parents who wished to have their children attend school for that length of time without a vacation. On the other hand, emergencies in the home could often be worked out advantageously for the children concerned by changing their vacation quarter, or by rotating vacation quarters for members of the family. It also helped

**Some educators see the four-quarter plan as ideal for "gifted children." Their idea: keep a few schools open during the summer for enrichment and speed-up. Obviously, this plan does not save money.**

when a child had been ill for any length of time.

**Q. Did you run into much opposition from parents when the plan went into effect?**

A. The parents that objected the most were those whose children had to attend school during the summer quarter. I don't think it involved more than 5 per cent of the families, however. We made concessions when they were possible. Most of the families cooperated in the assignment of their children to attend school in the particular quarters in which they were enrolled. Incidentally, the assignment to a winter vacation caused about as many complaints as the assignment for school during the summer.

**Q. How did you decide when to start a child beginning school for the first time?**

A. Any child who had his sixth birthday during any quarter was admitted at the beginning of the following quarter. Graduation exercises for students completing high school were held at the end of the quarter in which they finished.

**Q. Mr. Wilson, while you put in your year-round program to fill the gap when you were over-crowded, your district certainly must have saved money in the process. Do you have any kind of breakdown of the savings?**

A. We saved money, all right. I'll

read off to you a list of the savings as shown in a study made by H. R. Vanderslice, Superintendent of the Aliquippa Schools at that time. These figures, incidentally, cover a 7-year period in the 1930's. All costs have gone up so they don't necessarily reflect the saving that could be made today.

**Q. Could you give us the total figure first?**

A. We saved about \$40,000 a year over the seven years covered by this study. Here's a breakdown:

Debt Service	\$103,560.00
Fuel	6,590.00
Light & Power	10,052.00
Maintenance of Plant	12,627.00
Insurance	1,541.00
State Tax on Bonds	5,035.00
Reteaching Pupil	
Failures	43,982.00
Teachers' Salaries	96,880.00
Payments to School	
Employees' Retirement	
Fund	1,792.00

Total for 7-year period \$282,059.00

**Q. By "debt service" do you mean the saving made because you didn't have to build classrooms?**

A. That's right. The savings in debt service resulted because the all-year school eliminated the need to increase our plant by approximately 40 rooms.

**Q. How did you save money on fuel?**

A. This is an estimated figure based on the fact that we didn't have to

**Interestingly enough, although the four-quarter plan is widely talked about, apparently no elementary or high school system in the country is now using it. Colleges have found it satisfactory and still use it widely.**

heat the schools during June, July, and August. The same is true of "light and power". Here, the study showed, we saved approximately one-fifth the cost during the summer months as compared with the remaining months of the year.

**Q. How did you come up with a**

**saving figure on "maintenance"?**

A. The cost of maintenance was estimated by using all the expense items for maintenance and reducing the total maintenance cost to a cost-per-month basis. The saving is based on the assumption that buildings used 12 months in the year do not entail a greater maintenance cost than those used over a 9-month period. By the same token, the saving from "reteaching" pupil failures is estimated on the re-teaching of pupil failures over 12 weeks rather than 18 or 36 weeks.

**Q. Will you explain the saving in teachers' salaries?**

A. There is not much sense in detailing that one. At the time of this program, we had a statutory maximum on teachers' salaries. Under the present law in Pennsylvania, there would be little or no savings on teachers' salaries, in the all-year plan. It is interesting to note that most of the teachers chose to teach for 12 months. After five years of operation of the all-year school, the board of education adopted a modification of the policy of permitting teachers to teach all 12 months. Sixty teachers were given nine-month contracts and their vacation quarters were staggered the same as the pupils'. In this way, twenty new positions were created, thus helping to relieve the teacher-surplus situation at that time. That's no problem now! I should add that a cumulative sick-leave plan was adopted permitting a teacher to ask for a sabbatical leave for one quarter, on full pay, when 30 or more unused days of sick leave had been accumulated.

**Q. What about your attendance problem for students—did absenteeism rise?**

A. We checked this carefully. The variation wasn't more than one percent, but it did vary slightly from school to school. Actually, variations during the different seasons of the year were very slight. The compulsory attendance law was enforced, of course, although there was no particular problem in compelling attendance. There was somewhat less absence for illness during the summer and spring quarters,

but this can be attributed to the weather conditions. There is always more sickness during the late Fall, Winter, and early Spring months.

**Q. How did you keep the kids awake during hot summer days?**

A. I have been asked that many times. Remember, schools all over the country hold summer sessions and pupils, in increasing numbers, attend to make-up failing grades or to do advance work. You're just as likely to get peak temperatures in June or September, as in July or August, in our part of the country. In Aliquippa, school opened and closed a half-hour earlier during the summer quarter, which helped to get away from a long session during the hottest part of the day. No school group was dismissed unless the temperature in the particular room reached 90 degrees. Usually, this meant the loss of an hour or not more than two hours, on any one day. It wasn't a significant factor.

**Q. Did you make any effort, in the study, to determine whether the program had a bad effect on the children physically or educationally?**

A. Yes. So far as the physical effect is concerned, our study showed that the growth of pupils in the all-year school *exceeded* the growth during the nine-month school! I wouldn't use this as an argument however, because other factors probably influenced child growth.

Now, so far as pupil achieve-

ment was concerned, we had considerable difficulty in obtaining reliable data. Originally, 200 pupils in the nine-month schools were paired with respect to age, grade, sex and mental ability with the same number in the four-quarter schools. We had to abandon this plan because so many people moved and, also, because all of the schools of Aliquippa were placed on the 12-month plan sooner than had originally been expected. The next test considered was the establishment of a control group of pupils attending school during the four quarters of the year. This plan was abandoned on account of the difficulty of maintaining a group of considerable size intact through four consecutive quarters. Finally, we resorted to a study of pupil marks, en masse, as the most practical method of obtaining information. The quarterly marks were tabulated for major high school subjects over a period of three years. The results showed the highest percentage of failures occurred in the second or Fall quarter, and next to the highest in the first quarter. Part of the explanation for this is found in the large number of pupils entering the High School from outside the district during the first or Summer quarter and the second, or Fall quarter. This always meant a difficult adjustment.

**Q. Do you believe an objective study can be made, or have you ever heard of one?**

A. A study was made by Harold S. Irons on the experience of the Ambridge Schools under the four-quarter plan. He reported no significant difference in pupil achievement. He found, however, a slight advantage for the 12-month school. In Aliquippa, no evidence was found that the four-quarter plan was detrimental to pupil progress. I think there was a slight tendency on the part of teachers to fail pupils who were borderline cases on the theory that such pupils were not severely penalized by repeating one quarter of work since the work could be made up during the vacation period to which they were assigned. No particular study of this point was made, however.

**Q. What would you advise a school district today, in light of your experience with the four-quarter plan?**

A. There are, no doubt, places where the four-quarter plan could well be utilized as a temporary or even a permanent plan where the classroom shortage is acute. However, it seems to me, after ten years' experience with the four-quarter plan, that it is more reasonable to consider it as a temporary or "stop-gap" measure which permits a full-time educational program in a rapidly growing community until such a time as classroom space can be provided for all the pupils.

## NO! SAYS ATLANTA . . . it's cheaper to build



ATLANTA—From where some big taxpayers and a few editorial writers sat, it looked like a cinch: "Run the schools 12 months a year and we won't have to shell out so much money for expensive new buildings."

That was the sort of talk going around in metropolitan Atlanta (population 800,000) as 1957 began. The three major school systems in the area—Atlanta, Fulton

County and DeKalb County—were floating, or getting ready to float, new bond issues for new schools.

The all-year school plan popped up as a possibility, and while most school officials were skeptical about it off hand, public and press pressure were on. The result: A blue-ribbon committee from the three systems to study it from all angles. The group worked hard for five

(Continued on page 82)

# How to keep your bond costs down

## WHEN YOU BUILD A NEW SCHOOL

Here are several business-like financing plans which can reduce the impact of a new bond issue — and help get taxpayer approval.

By FREDERICK J. DE LA FLEUR

■ ■ ■ NOWADAYS, when a school board is faced with having to build a new school, four questions immediately come to mind:

- *What will it cost?*
- *Will the taxpayers approve it?*
- *What interest will we have to pay?*
- *How can we keep the tax increase down?*

In fact, these questions are often asked *before* the board even considers the problem in terms of educational needs.

Obviously, a district can't build a new school without spending money. Just as obviously, if a school district must borrow money it's going to have to pay for it, too. So the

problem today, is one of minimizing the impact of new construction financing on the school district's financial position.

There are several ways of accomplishing this objective. It is simple tax justice to investigate the various methods and to choose, within the district's ability to pay, the method which best suits the local situation.

### A case-history comparison

Take the case of one medium-sized school district in New York State. We laid out a maturity schedule, well within the ability of the district to pay, to cover a span of twenty years. It was rejected by the board of education. Smaller annual payments spread over thirty years were wanted. When we set up the second maturity schedule, we estimated interest rates in accordance with the money market at the time,

TABLE 1

Comparison of interest costs under conventional 30-year and 20-year maturity schedules

Year	Principal Out- standing	Interest @ 4.2%		
		Payments on Principal	Interest	Total
1	\$1,500,000	\$40,000	\$63,000	\$103,000
2	1,460,000	40,000	61,320	101,320
3	1,420,000	40,000	59,640	99,640
4	1,380,000	40,000	57,960	97,960
5	1,340,000	40,000	56,280	96,280
6	1,300,000	45,000	54,600	99,600
7	1,255,000	45,000	52,710	97,710
8	1,210,000	45,000	50,820	95,820
9	1,165,000	45,000	48,930	93,930
10	1,120,000	45,000	47,040	92,040
11	1,075,000	50,000	45,150	95,150
12	1,025,000	50,000	43,050	93,050
13	975,000	50,000	40,950	90,950
14	925,000	50,000	38,850	88,850
15	875,000	50,000	36,750	86,750
16	825,000	50,000	34,650	84,650
17	775,000	50,000	32,550	82,550
18	725,000	50,000	30,450	80,450
19	675,000	50,000	28,350	78,350
20	625,000	50,000	26,250	76,250
21	575,000	55,000	24,150	79,150
22	520,000	55,000	21,840	74,840
23	465,000	55,000	19,530	74,530
24	410,000	55,000	17,220	72,220
25	355,000	55,000	14,910	69,910
26	300,000	60,000	12,600	72,600
27	240,000	60,000	10,080	70,080
28	180,000	60,000	7,560	67,560
29	120,000	60,000	5,040	65,040
30	60,000	60,000	2,520	62,520
TOTAL		1,500,000	1,044,750	2,544,750

Year	Principal Out- standing	Interest @ 4%		
		Payments on Principal	Interest	Total
1	\$1,500,000	\$60,000	\$60,000	\$120,000
2	1,440,000	60,000	57,600	117,600
3	1,380,000	60,000	55,200	115,200
4	1,320,000	65,000	52,800	117,800
5	1,255,000	65,000	50,200	115,200
6	1,190,000	65,000	47,600	112,600
7	1,125,000	70,000	45,000	115,000
8	1,055,000	70,000	42,200	112,200
9	985,000	75,000	39,400	114,400
10	910,000	75,000	36,400	111,400
11	835,000	75,000	33,400	108,400
12	760,000	75,000	30,400	105,400
13	685,000	80,000	27,400	107,400
14	605,000	80,000	24,200	104,200
15	525,000	85,000	21,000	106,000
16	440,000	85,000	17,600	102,600
17	355,000	85,000	14,200	99,200
18	270,000	90,000	10,800	100,800
19	180,000	90,000	7,200	97,200
20	90,000	90,000	3,600	93,600
TOTAL		1,500,000	676,200	2,176,200

### Comparative Saving

1,044,750

676,200

\$ 368,550 difference in interest costs

Frederick J. De La Fleur is Educational Consultant, Governmental Statistical Corporation, Syracuse, N. Y.

TABLE 2

Comparison of interest costs under conventional 30-year maturity schedule, and 20-year schedule with more rapid repayments in earlier years

## Interest @ 4.2%

Year	Principal	Outstanding	Payments on	Total
	Year standing	Principal	Interest	
1	\$1,500,000	\$40,000	\$63,000	\$103,000
2	1,460,000	40,000	61,320	101,320
3	1,420,000	40,000	59,640	99,640
4	1,380,000	40,000	57,960	97,960
5	1,340,000	40,000	56,280	96,280
6	1,300,000	45,000	54,600	99,600
7	1,255,000	45,000	52,710	97,710
8	1,210,000	45,000	50,820	95,820
9	1,165,000	45,000	48,930	93,930
10	1,120,000	45,000	47,040	92,040
11	1,075,000	50,000	45,150	95,150
12	1,025,000	50,000	43,050	93,050
13	975,000	50,000	40,950	90,950
14	925,000	50,000	38,850	88,850
15	875,000	50,000	36,750	86,750
16	825,000	50,000	34,650	84,650
17	775,000	50,000	32,550	82,550
18	725,000	50,000	30,450	80,450
19	675,000	50,000	28,350	78,350
20	625,000	50,000	26,250	76,250
21	575,000	55,000	24,150	79,150
22	520,000	55,000	21,840	75,840
23	465,000	55,000	19,530	74,530
24	410,000	55,000	17,220	72,220
25	355,000	55,000	14,910	69,910
26	300,000	60,000	12,600	72,600
27	240,000	60,000	10,080	70,080
28	180,000	60,000	7,560	67,560
29	120,000	60,000	5,040	65,040
30	60,000	60,000	2,520	62,520
<b>TOTAL</b>	<b>1,500,000</b>	<b>1,044,750</b>	<b>2,544,750</b>	

## Interest @ 3.9%

Year	Principal	Outstanding	Payments on	Total
	Year standing	Principal	Interest	
1	\$1,500,000	\$90,000	\$58,500	\$148,500
2	1,410,000	90,000	54,990	144,990
3	1,320,000	90,000	51,480	141,480
4	1,230,000	85,000	47,970	132,970
5	1,145,000	85,000	44,655	129,655
6	1,060,000	85,000	41,340	126,340
7	975,000	80,000	38,025	118,025
8	895,000	80,000	34,905	114,905
9	815,000	75,000	31,785	106,785
10	740,000	75,000	28,660	103,660
11	665,000	75,000	25,935	100,935
12	590,000	75,000	23,010	98,010
13	515,000	70,000	20,085	90,085
14	445,000	70,000	17,355	87,355
15	375,000	65,000	14,625	79,625
16	310,000	65,000	12,090	77,090
17	245,000	65,000	9,555	74,555
18	180,000	60,000	7,020	67,020
19	120,000	60,000	4,680	64,680
20	60,000	60,000	2,340	62,340
<b>TOTAL</b>	<b>1,500,000</b>	<b>569,205</b>	<b>2,069,205</b>	

## Comparative Saving

1,044,750  
- 569,205

\$ 475,545 difference in interest costs

TABLE 3

Comparison of interest costs under conventional 20-year maturity schedules, without and with reserve fund

## Interest @ 4%

Year	Principal	Outstanding	Payments on	Total
	Year standing	Principal	Interest	
1	\$1,500,000	\$60,000	\$60,000	\$120,000
2	1,440,000	60,000	57,600	117,600
3	1,380,000	60,000	55,200	115,200
4	1,320,000	65,000	52,800	117,800
5	1,255,000	65,000	50,200	115,200
6	1,190,000	65,000	47,600	112,600
7	1,125,000	70,000	45,000	115,000
8	1,055,000	70,000	42,200	112,200
9	985,000	75,000	39,400	114,400
10	910,000	75,000	36,400	111,400
11	835,000	75,000	33,400	108,400
12	760,000	75,000	30,400	105,400
13	685,000	80,000	27,400	107,400
14	605,000	80,000	24,200	104,200
15	525,000	85,000	21,000	106,000
16	440,000	85,000	17,600	102,600
17	355,000	85,000	14,200	99,200
18	270,000	90,000	10,800	100,800
19	180,000	90,000	7,200	97,200
20	90,000	90,000	3,600	93,600
<b>TOTAL</b>	<b>1,500,000</b>	<b>676,200</b>	<b>2,176,200</b>	

## Interest @ 4%

Year	Principal	Outstanding	Payments on	Total
	Year standing	Principal	Interest	
1	\$970,000	\$40,000	\$38,800	\$78,800
2	930,000	40,000	37,200	77,200
3	890,000	40,000	35,600	75,600
4	850,000	40,000	34,000	74,000
5	810,000	45,000	32,400	77,400
6	745,000	45,000	30,600	75,600
7	720,000	45,000	28,800	73,800
8	675,000	45,000	27,000	72,000
9	630,000	45,000	25,200	70,200
10	585,000	50,000	23,400	73,400
11	535,000	50,000	21,400	71,400
12	485,000	50,000	19,400	69,400
13	435,000	50,000	17,400	67,400
14	385,000	50,000	15,400	65,400
15	335,000	50,000	13,400	63,400
16	285,000	55,000	11,400	66,400
17	230,000	55,000	9,200	64,200
18	175,000	55,000	7,000	62,000
19	120,000	60,000	4,800	64,800
20	60,000	60,000	2,400	62,400
<b>TOTAL</b>	<b>970,000</b>	<b>434,800</b>	<b>1,404,800</b>	

## Comparative Saving

676,200  
- 434,800  
\$241,400 savings in interest costs

The situations illustrated in these three tables are typical examples of how savings in interest costs may be made. Various combinations of tables should be drawn up for the School Board's consideration.

and then totaled interest costs of each schedule. The difference in interest costs was nearly a quarter of a million dollars! Fortunately, the board of education then accepted the maturity schedule which they had earlier rejected.

Table 1, (see opposite page), shows what might be done with a bond issue of \$1,500,000 under two different maturity schedules. At the present writing, if the 30-year maturity schedule were to sell at 4.2%, the 20-year maturity schedule would be likely to sell at about 3.9% to 4%. The shorter maturity at 4% can be seen, therefore, to save the taxpayers the total sum of \$368,550 under these circumstances.

It must be noted that, as market conditions change, this difference in interest rates may increase or decrease. But if a district can afford to spend an average of \$17,039 a year more than the longer schedule calls for, its ultimate savings are likely to approach or even exceed the extra annual expenditure.

Of further importance, this district has, in the event that this should be necessary, recaptured its credit earlier under the shorter maturity schedule than under the longer one. The district is likely to obtain a better interest rate on a later issue than if it had chosen the longer maturity schedule for the first one. This will save on interest costs on the later issue as well. *The district should include this evidence of planning in its bond brochures in order to capitalize fully on it.*

## Faster maturity, lower rates

At the present time school districts faced with construction needs are confronted with the following situation:

- High school education is more costly than elementary education
- High school enrollments, and therefore educational costs, too, are going to increase rapidly, beginning about 1959-60.
- In the money market, at the present writing, bonds of intermediate maturities are not selling well.

Therefore, what would be more natural than to recognize this and to make larger payments now, *continued on page 72*

# How far ahead can a School District plan?

The answer lies in the school board's ability to sell its program to the taxpayers. In this tape-recorded interview, the board and administration of Corona, California, tell you what they learned from three straight defeats, and how they finally won a victory.

## General Background

■ ■ ■ DURING THE LAST FEW years, Corona, California, has gone through a period of explosive growth. In 1945, the school district had a population of only 12,000. Today, its population is 30,000. In 1945, its school enrollment was only 2,372. By the end of the 1956-1957 school year, pupil enrollment had jumped to 5,078.

As always happens in periods of swift population growth, the in-

crease in assessed valuations fell far behind Corona's financial ability to pay for more schools. By 1956 Corona had reached the legal limit of its borrowing power. From that point on, a two thirds vote of the residents was needed for each new issue of school bonds. Three times in a row—during 1954, 1955, 1956—the community voted down school referendums. Finally, early this year, a referendum for \$2,500,-

000 was passed overwhelmingly.

Here's the story of how Corona plans for future expansion. Here, too, is the candid story of how its last bond issue was passed.

A SCHOOL MANAGEMENT editor interviewed two members of the school board, the superintendent, and a member of the school's architectural firm, Daniel, Mann, Johnson & Mendenhall. The following is in their own words.





*left to right*

S/M editor Conarroe

**James Merrihew**

Superintendent, has just finished first year at Corona

**Jesse Lillibridge**

Local farmer and businessman, a school board member 10 years

**Arthur Mann**

*(back to camera)*

Member of firm, Daniel, Mann, Johnson & Mendenhall, Architects and Engineers, Los Angeles

**Vischner Boyd**

Chief architect, Daniel, Mann, Johnson & Mendenhall

**Mark Hendrickson**

School board president, a retired rancher

**Q** One of the toughest problems a school district faces today is planning ahead for future building requirements. There seems to be a tendency to under-plan rather than to over-plan. Let's start with a superintendent's point of view. Do you

**agree with my statement, Mr. Merrihew?**

**A.** I don't think under-planning is deliberate. We project enrollment on the basis of past growth. We project assessed valuation on the basis of past assessed valuation. It's an inexact method—and sometimes our estimates are short.

**Q.** Do you think past performance

is an adequate yardstick? Is that what's wrong with our present method of planning ahead?

**A. (HENDRICKSON, school board president):** It is in our particular community. Corona was relatively dormant for many years, until the last year or two. Now industries are moving in rapidly. We can't anticipate. We know that we had a 10% growth this year in our schools. If you want a long guess, I would say

## Lillibridge: "However far ahead we plan

we will get, during the next four or five years, maybe 15% or 20%.

Q. Then you would say that projection of past growth is not necessarily a very good method of planning for the future?

A. In our particular district, no. In others, it might be.

**Q Mr. Lillibridge, as a school board member for many years, how far ahead do you think a school board should try to plan its building program?**

A. (LILLIBRIDGE): Well, it's pretty hard to say. As Mark said, our picture is reversing itself. We used to be able to plan quite a bit ahead. Now we just take our growth and try to do the best we can with it. I can tell you one thing though—however far ahead we plan, we can't pass our bond issues fast enough to take our growth. In other words, we must have the need before we can pass a bond issue.

Q. Isn't there any way you can avoid that lag?

A. (HENDRICKSON): The school board could—but the taxpayers won't let us.

Q. In other words, you feel there is no way you can pre-plan schools you know you are going to need in two years, three years, or five years?

A. (MERRIHEW): Let me tell you what we are doing. . . . We have four schools in progress right now. We also have three new elementary schools that are on the drawing boards and a junior high school under construction. We have approved site utilization plans for all three elementary schools and we are in initial planning stages on all three. In addition, we are in planning stages on three other elementary schools. That's not all. We have plans for four additional sites right now. We haven't acquired any of them, yet, but we expect to acquire at least one of them in the very near future.

**Q Can you get money before you have the actual need?**

A. You can for acquiring sites—but you can project only four years for actual building. In fact, we can only plan two years in advance for elementary schools. A district can plan farther ahead by going to its own taxpayers as long as district bonding capacity is available.

Q. But you say the taxpayer won't let you plan ahead . . .

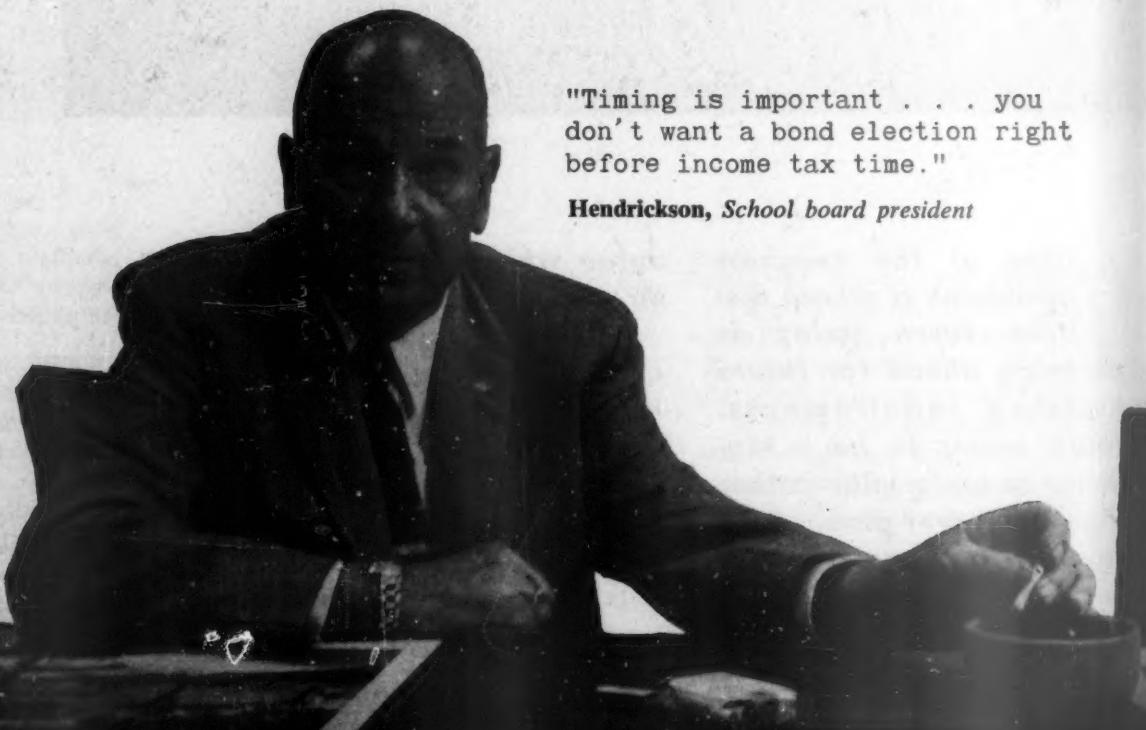
A. (MERRIHEW): Don't blame the public too much. Let's say that you're a young fellow just getting married, and you and your wife plan to have five children. Now, do you go out and buy a six-bedroom house right away? Wouldn't you wait until your family was an accomplished fact? The taxpayers have other immediate needs and they tend to let schools wait until the need for facilities is present.

Q. Do you think that's a valid comparison?

A. Maybe it isn't for a school board—but that's the way the average taxpayer seems to think.

Q. Do you think that type of person predominates? Isn't it possible that you're oriented to the people making the loudest noise?

A. (LILLIBRIDGE): Unfortunately, we have to move a large number of people to pass a bond issue. We are very different from an industry. An industry has a board of directors and they can plan an expansion, and then carry it out, without having the vote of every stockholder. But any time we are going to expand, we must have a two thirds vote of our stockholders. That's not



"Timing is important . . . you don't want a bond election right before income tax time."

**Hendrickson, School board president**

we can't pass our bond issues fast enough."

easy. You know, people very often say that 25% of the people vote "yes" on everything because they are just agreeable people. And another 25% vote "no" on everything. That leaves 50%. A little simple arithmetic shows that we must get 84% of that 50% in order to win. The opponents only have to get 17%.

**Q.** We're not trying to minimize your problems. . . . It's just that there seem to be obvious economies possible if a board was able to plan farther ahead.

**A. (ARTHUR MANN, Architect):** If you were to probe the hearts and souls of school people, you'd find they would love to have a long-range plan. Usually, they have to wait until two years *after the need is there* before they can get action. Even then, they have a selling job to do. It's a rare community that will shell out the money to stay ahead, even though it knows that in the long run it will save all kinds of money. I know one thing, prices are going up from 4% to 10% a year. Average it out at 7%. If you multiply that by 7 years for pre-planning, you can see the terrific savings. It isn't the school people who are blocking it. It's the people who are paying out the money right now.

**Q** **But as an architect you do think it is feasible to plan ahead? In other words, you would agree that it's possible to save plenty of money if the public would let you?**

**A. (MANN):** There are problems there too. For example, we have several school districts we are working with on saturation surveys of their entire district. In a study like that we make an intelligent guess, on the basis of zoning, as to what their population load is going to be. But then something like this happens—we recently took a small district near here and made a saturation survey based on its present zoning for single residential lots. We knew from that

study pretty well where they were going population-wise. Now they have rezoned several areas for apartments! Where we figured there will be one house, there will be anywhere from four to ten apartments. There goes your planning . . .

★ ★ ★

**Q.** I think you gentlemen know I've been baiting you. But from what you've said, one thing puzzles me. I heard, before I came out here, that your town was recently rather successful in having a school bond issue passed. Is that correct?

**A. (HENDRICKSON):** That is correct. We were fortunate then, but we were unfortunate three times.

**Q** **Why were you successful this time? What made the difference between three failures and this success?**

**A. (MERRIHEW):** I'd like to answer that by saying that when you pass any bond election, these days, it's because you work hard. You're faced with an incredible amount of apathy, and when people don't know or care about something, they are likely to vote "no." The one thing they will respond to is an unbelievable amount of just plain labor. You must get out and see every group . . . see every individual. If you analyze an election defeat, you generally find it was lost because of over-confidence.

**Q.** You're smiling, Mr. Lillibridge. Does that mean you don't agree?

**A. Oh,** I agree about the work. But you also have to have a right set of conditions. In other words, you can work your head off and still lose the election. This time we had people working for us that we didn't have before. We had a lot of kids on double-sessions and some of them had to go crosstown to another school because the schools on their side of town were all filled up. That's when the telephone starts ringing! We couldn't even touch the

*continued on page 66*





# So you think your schools are well-insured?

By MICHAEL LEVY

The rapid rise in real estate values can be a trap—unless you understand “co-insurance.” This article tells how to judge whether your district has adequate protection against even a partial loss.

■ ■ ■ ABOUT A YEAR AGO, a small Eastern School had a fire during the night. Two of its seven classrooms were almost completely gutted. The loss was estimated at slightly more than \$40,000.

Two days later, the school board met with their insurance company adjuster to arrange for a settlement.

The board got a shock. Although they were insured for \$80,000, they found that their “collectible loss” was only \$26,000! The reason: the true worth of the school building was \$150,000. The board had only insured it for \$80,000, so the school district was in the position of “co-insuring” against possible loss.

Does this sound unfair? Actually, it's not—but one must understand the principle of “co-insurance” to realize that insurance rates would be far higher were it not for the co-insurance clause.

Put yourself in the position of an insurance company. Their experience proves that few fire losses

### 1. VALUE UNCHANGED— INSURANCE UNCHANGED

Value of property at time of loss	\$100,000
Amount of insurance required by Co- Insurance Clause (80%)	80,000
Amount of insurance at time of loss	80,000
Actual amount of loss	40,000
<b>Collectible loss</b>	
\$80,000 (Amt. of Ins.)	
$\$80,000 \text{ (80% of Value)} \times \$40,000 =$	<b>40,000</b>

### 2. VALUE INCREASED— INSURANCE UNCHANGED

Value of property at time of loss	\$150,000
Amount of insurance required by Co- Insurance Clause (80%)	120,000
Amount of insurance at time of loss	80,000
Actual amount of loss	40,000
<b>Collectible loss</b>	
\$80,000 (Amt. of Ins.)	
$\$120,000 \text{ (80% of Value)} \times \$40,000 =$	<b>26,667</b>
<b>Uncollectible loss</b>	<b>13,333</b>

### 3. VALUE UNCHANGED— INSURANCE TOO LOW

Value of property at time of loss	\$100,000
Amount of insurance required by Co- Insurance Clause (80%)	80,000
Amount of insurance at time of loss	50,000
Actual amount of loss	40,000
<b>Collectible loss</b>	
\$50,000 (Amt. of Ins.)	
$\$80,000 \text{ (80% of Value)} \times \$40,000 =$	<b>25,000</b>
<b>Uncollectible loss</b>	<b>15,000</b>

### 4. VALUE INCREASED— INSURANCE TOO LOW

Value of property	\$150,000
Amount of insurance required by Co- Insurance Clause (80%)	120,000
Amount of insurance in force	50,000
Actual amount of loss	40,000
<b>Collectible loss</b>	
\$50,000 (Amt. of Ins.)	
$\$120,000 \text{ (80% of Value)} \times \$40,000 =$	<b>16,667</b>
<b>Uncollectible loss</b>	<b>23,333</b>

Here are the four situations faced by a school board, described in the article below. In the first two cases, the original insurance was adequate. In the second two cases, original coverage was below insurable value.

are *total*. Just as in the case described above, a fire is usually brought under control before it destroys a whole structure. But insurance premiums are based on the *total* amount of insurance carried in a policy. The more you carry, the more you pay. Thus, but for the co-insurance clause, a prudent school board might well decide to *under-insure* purposely. If all school boards figured this way, the insurance company would have no "cushion". It would have to increase its rates sharply.

To avoid this, the insurance companies demand that the insured carry enough insurance to maintain their true load from a risk position. Whenever the insured is carrying

less than the true value of the property, he is—in effect—insuring himself for the remainder. In other words, he is actually in partnership with the insurance company in insuring against a total loss.

#### Four case examples

The best way to explain the co-insurance written into most fire insurance policies is to take an actual case. We'll use the basic figures that apply to the fire described at the beginning of this article. We'll apply these figures to four different situations in which a school board might find itself.

Let's say that the insurable value of this school was \$100,000 at the time the property was first insured.

Furthermore, let's say that the insurance company requires that the school board carry 80% of this insurable value. Finally, let's say that the actual loss is \$40,000 in all four cases.

#### Example One

Assume, for the purpose of comparison, that the value of the property is unchanged since the time it was first insured, and the 80% "co-

**Michael H. Levy, Chairman of the Board of The Federated Brokerage Group, heads a firm that insures over 300 schools. He is the author of several books on insurance.**

## HOW TO FIND THE VALUE OF YOUR SCHOOL PROPERTY

1. Have an appraisal made by an independent appraiser. It should show replacement value of buildings, depreciation factors and "insurable value." To get an appraiser, check the yellow pages of your phone book. If none are available, call in a reputable real estate man or building contractor.
2. A detailed inventory should be made of the contents of all buildings. This inventory should be "perpetual." It should show original purchase price, replacement price and depreciation factor. In addition, property disposed of and purchased should be indicated in the appraisal which should be kept up-to-

date at all times. This is a relatively easy job, well within the capabilities of your school office.

3. If a building is new and of comparatively recent construction, take construction costs and modify by building index changes. This can substitute for appraisal.

**WARNING:** Guesswork (no matter how "educated") is highly hazardous in determining the value of school property. Rule-of-thumb formulae are also risky. Start with a firm valuation base and you will have eliminated a major problem.

"insurance" clause is met. In other words, the school is insured for \$80,000. In this case, after a damage of \$40,000, payment will be figured this way:

Value of property at time of loss	\$100,000
Amount of insurance required by Co-Insurance Clause (80%)	80,000
Amount of insurance in force at time of loss	80,000
Actual amount of loss	40,000
Collectible loss—	
\$80,000 (Amt. of Ins.)	
\$80,000 (80% of Value)	
x \$40,000 = 40,000	

### Example Two

The above loss is paid in full, but notice what happened when the insurance remained at \$80,000, but the *insurable value* of the property had increased to \$150,000 at the time of the loss. In this case, payment is figured this way:

Value of property at time of loss	\$150,000
Amount of insurance required by Co-Insurance Clause (80%)	120,000
Amount of insurance in force at time of loss	80,000
Actual amount of loss	40,000
Collectible loss—	
\$80,000 (Amt. of Ins.)	
\$120,000 (80% of Value)	
x \$40,000 = 26,667	
Uncollectible loss	13,333

This is what happened to the school mentioned above. It found that it had a partially uncollectible loss because, *before the loss oc-*

*curred*, the insurable value of this property had increased to \$150,000, but the board had failed to increase the face amount of the policy to \$120,000 in order to maintain the 80%-to-value co-insurance requirement. This situation is common today because of rapid increases in property value.

### Example Three

In both of the above cases, the school had been adequately insured when it was built. Now let's see what happens when one *starts out* with too little insurance.

Again, let's assume that the insurable value of the property does not change between the time it is first insured and the time the loss occurs, but that only \$50,000 of insurance is carried. The \$40,000 loss be figured this way:

Value of property at time of loss	\$100,000
Amount of insurance required by Co-Insurance Clause (80%)	80,000
Amount of insurance in force at time of loss	50,000
Actual amount of loss	40,000
Collectible loss—	
\$50,000 (Amt. of Ins.)	
\$80,000 (80% of Value)	
x \$40,000 = 25,000	
Uncollectible loss	15,000

### Example Four

Now notice what happens to the collectible loss as the insurable value of the school property increases, but the amount of insur-

ance in force is not increased. Assuming that the value has increased to \$150,000 at the time the loss occurs, payment will be figured this way:

Value of property	\$150,000
Amount of insurance required by Co-Insurance Clause (80%)	120,000
Amount of insurance in force	50,000
Actual amount of loss	40,000
Collectible loss—	
\$50,000 (Amt. of Ins.)	
\$120,000 (80% of Value)	
x \$40,000 = 16,667	
Uncollectible loss	23,333

This illustrates that unless the school board or another financial guardian watches the school's insurable values, the loss-payment may be considerably less than is expected. In this last case, the school originally arranged for payment of 60½% of any loss up to \$50,000, but an increase in the insurable value of the property reduced the collectible loss to less than half the actual amount of the loss—only 41½% of it, to be exact.

This is quite typical of what happens to a school property, already badly under-insured, when the responsible individuals fail to close the widening gap between the increased value of the property and the amount of insurance carried on it. It is apparent that under-insurance, when coupled with today's rapid increase in property value, is a dangerous combination for any school board to accept.

# How to waste money when you build a school

■ ■ ■ LAST MONTH, two editors of SCHOOL MANAGEMENT met with several members of the architectural firm of LaPierre, Litchfield and Partners for an informal talk on schoolhouse planning. Each was asked to give a classic example, drawn from his own experience, of a mistake to be avoided in planning a new school. Reproduced on these pages, in the architects' own words, are the least-technical examples they recollect.

Frequently an over-zealous school board or administration will insist on costly frills, or economize on the wrong items. Here are a handful of wasteful building practices drawn from the experiences of a well-known firm of schoolhouse architects.

## “1. Buy a site that’s too small.”

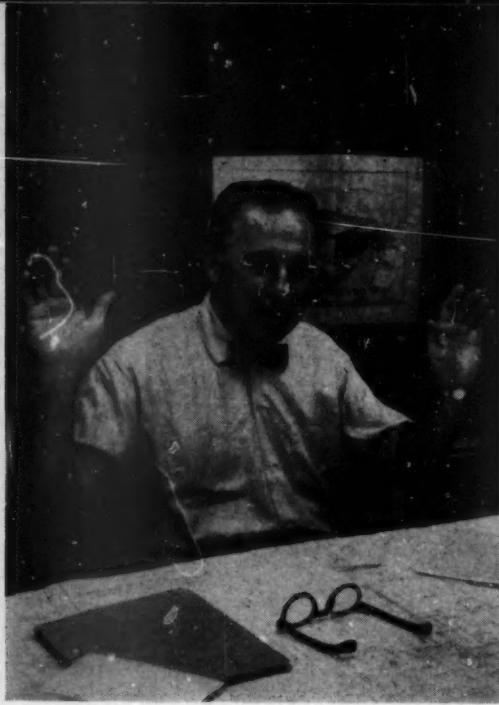
Clarence B. Litchfield

“One of the cheapest ways to get extra classrooms is to add a wing to an existing school. Yet most school boards continue to buy sites without planning for this contingency. When a new school is planned, a school board should require its architect to indicate where future wings can be added utilizing the property available. If expansion planning is not possible, then consideration should be given to another site. The way land prices

are going up, it makes sense to buy plenty of land right now . . .

“On the same subject, the school board should never buy a site unless the school can be located in a section of the property which requires very little earth moving. At the same time, it should remember that it is important to locate buildings to permit the shortest possible driveways, walks and utility lines. These factors affect initial costs and continued maintenance.”





*Gannett Herwig*

### **“ 2. Put too much faith in multi-purpose rooms. ”**

“I've seen this mistake many times—an all-purpose room is designed to serve too many uses. With proper programming, it's true that a dual-purpose space can save on building costs. For example, a gym and auditorium is a happy combination because school assemblies can be scheduled so as not to conflict with physical education programs. But, suppose the planners decide to use this same room as a cafeteria, too? Now a minimum of three hours daily must be eliminated from the physical education program. As a result, assemblies conflict with class periods. In fact, no activity is performed efficiently.”

### **“ 3. Build too many single-purpose rooms. ”**

“There is another side to that last 'bad practice.' This one begins with the school staff insisting that additional special-purpose rooms be added when, in reality, a single room will serve. As a result, I've seen many schools with certain rooms that are used only a few hours each day. A simple example is overplanning for extracurricular school activities, with separate rooms provided for each student organization. Real savings can be realized if such groups can meet on different days, or at different hours,

so the same room can be used consistently. This simply requires designing a room that is adequate to accommodate the largest organization. Folding partitions, or other moveable walls, give additional utility. In the same category, there is the example of adding a cloakroom near the auditorium, a room that will be used only for public meetings. In most cases, a nearby classroom will adequately serve the same purpose, since public meetings generally take place in after-school hours.”

*Frank Bower*



### **“ 4. Go to extremes on plenty of daylight. ”**

“Plenty of daylight can be provided in any room without going overboard on the subject. Excessive window area without solar control will contribute to unevenness of classroom light at different times of the day. It will also increase long-range heating or air-conditioning costs. I saw a gymnasium, for example, with so many special skylights that a youngster was blinded when he

raised his head to shoot a basket.

“While I'm at it, let me warn against specifying special materials without first checking on local labor and construction situations. The use of exotic materials or new ideas will often involve extra labor costs because the contractor isn't familiar with them. He raises his price to protect himself, and you pay to give him 'experience'.”

*Arthur H. Fuller*



## **“5. Plan your heating system for North Pole temperature.”**

“This is one of our pet peeves—the heating system with a really excessive standby capacity. Instead of preparing for the *unusual* in weather, with extra standby boilers, a plant should be installed to accommodate the mean average temperature. Doubling up on any expensive mechanical equipment becomes a luxury when repairs are so readily available. It should be remembered that schools and hospitals are given priority when emergency repairs are needed.”

*John B. Dodd, Ralston H. Miller and Lester S. La Pierre*



## **“6. Design a school for a maximum basement.”**



*Alfred A. Rothmann*

“Maybe this one is too technical for your readers—but it’s a real money saver. A good architect will save by limiting the number of under-floor trenches. To the layman, an under-floor trench is that sub-floor tunnel beneath a slab which carries heating pipes, return lines, electric wires, etc. These trenches average four feet wide by five feet deep. Considerable savings can be realized if they run along the perimeter of the building, following the foundation wall. If the architect uses the foundation wall and ceiling of the first floor, he saves half of the construction costs, without jeopardizing the efficiency of any of the mechanical installations.”

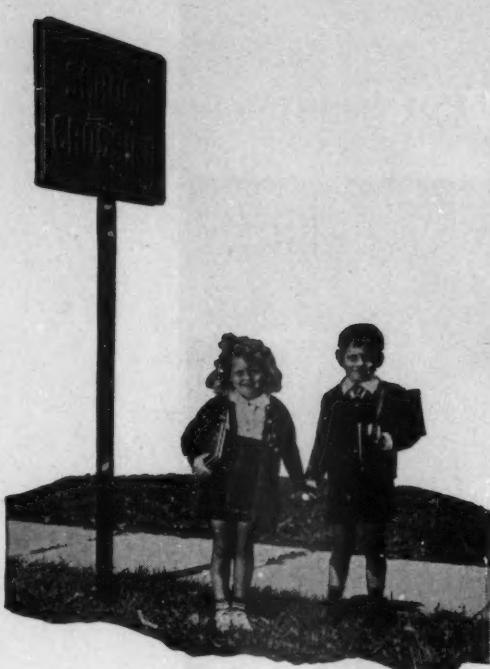
## **“7. Too many toilets, too many stairways.”**

“I put these two items in the same category as the excessively long corridors you see in older schools. They are wasteful. Take stairways. We need adequate stairways for safety, but a good overall design will eliminate a third stairway when two are adequate. Not only does a stairwell cost much more than normal working space,

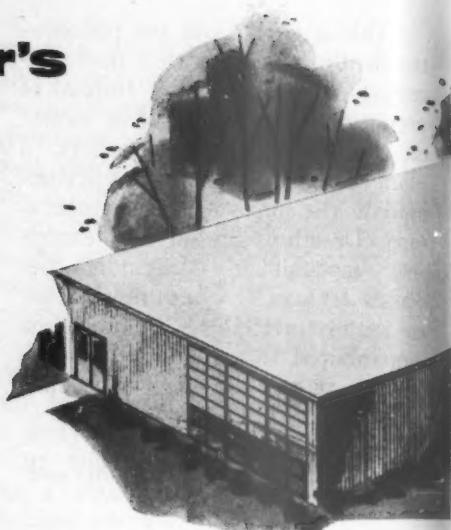
but it occupies an area that can be put to other productive use. As for toilets, costs can be cut, and valuable space saved for another purpose, if the number of toilets is kept to a minimum. Whenever possible, a single large toilet should be used in place of several small ones. Large savings can be realized on plumbing and classroom space is saved.”

*Arthur E. Doré*



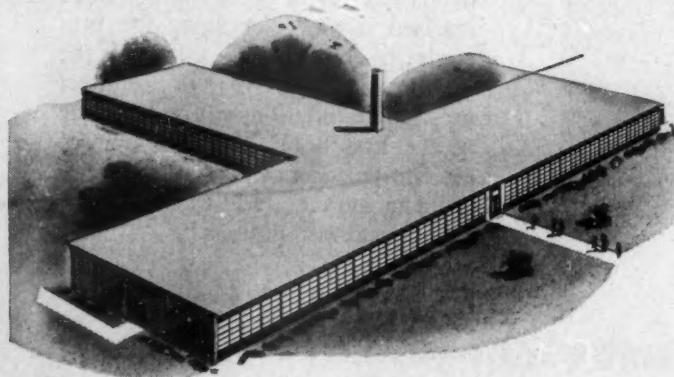


**Get next year's  
classes into  
classrooms  
next year...**

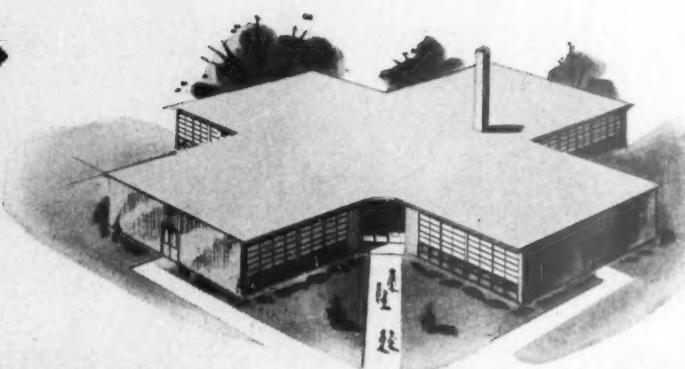


# New Adaptation of Truscon

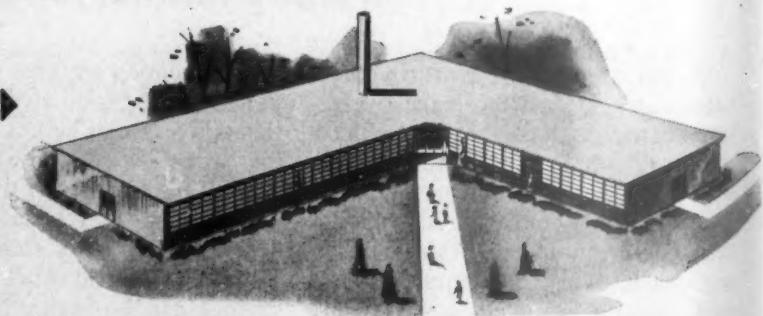
A basic plan for small-school construction at lowest possible cost. This design provides a single-story elementary school, completely integrated. It includes all elements of good school planning at moderate cost. Thanks to Truscon Vision-Vent Window Walls, wings have full daylighting on three sides. Offices and service facilities are at the center of the "X" shaped building. Additional facilities or more classrooms can be added by expansion in any direction.



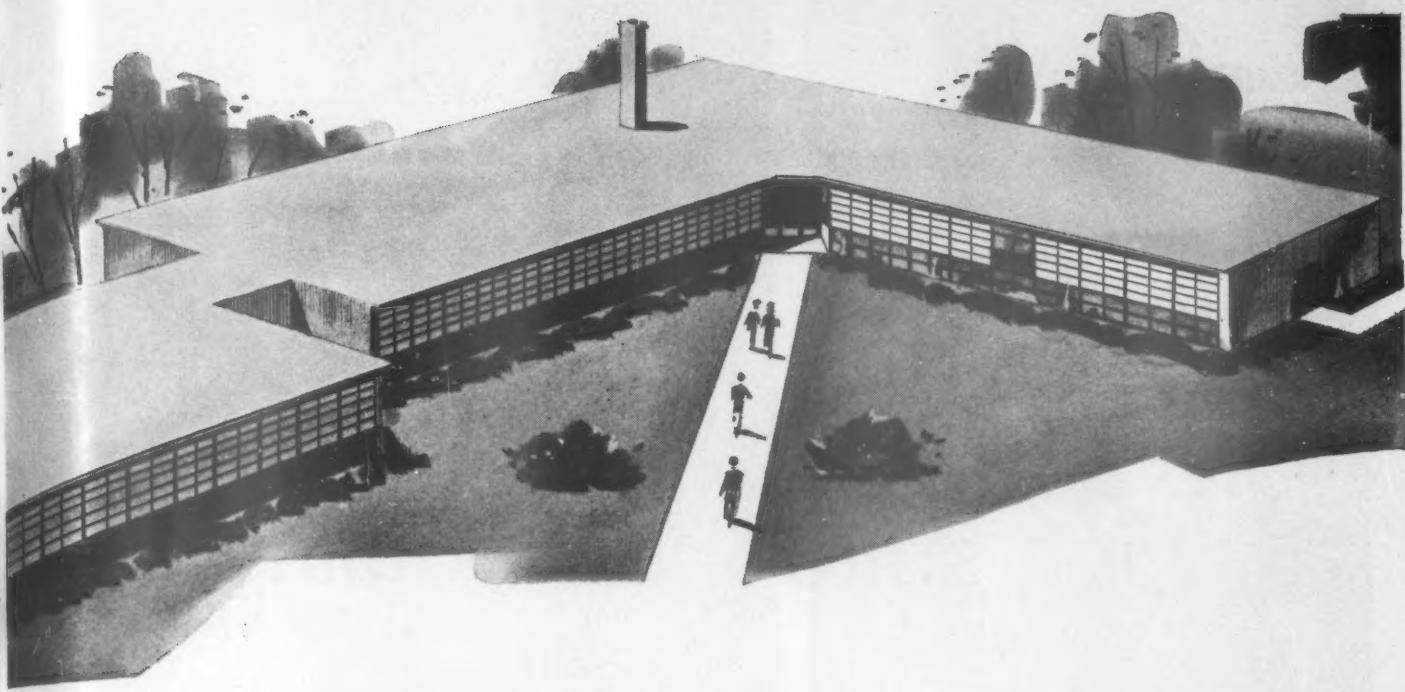
Standard "L" units provide unlimited room for future expansion. All insulated end walls of either wing can be removed, additional space added, and the end wall re-used. This means that expansion of a school building is limited only by the site, as indicated in main illustration above. Additions can be made rapidly, economically and in perfect architectural harmony. The best protection against obsolescence is provision for easy expansion.



◀ Retain the low cost of the basic plan . . . then plan to fit the site. Proper site is vital. Grade groupings, travel distances, accessibility of utilities, sewerage, fire protection, and transportation may be more important than topography. Projected community growth is an influence, too. The Truscon system of standard units which can be infinitely varied is the ideal solution to topographical problems, permitting you to select the site for its convenience rather than ground formation.



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Truscon products are designed to offer architects and communities everywhere a method for solving school space problems now, and for increasing or altering the layout in the future. They can provide needed classrooms now, with gymnasium or audi-

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## Look how they've simplified high school scheduling

In 1955, it took five school days for 70 teachers to register and program Nyack's students at the beginning of each term. Last September, 1300 pupils were completely scheduled the day school opened. Here's how Nyack uses modern business machines to reduce internal paperwork problems.

■ ■ ■ EVEN IN A SMALLER HIGH SCHOOL, the opening of a school term involves a major paperwork problem. Few outsiders see it—or fully reckon its cost. Somehow, after endless hours of clerical drudgery, the administration and staff evolve a plan whereby hundreds of students and dozens of teachers can meet, in a limited number of classrooms, to start the educational process. Even then, for days later, the office is busy trying to straighten out "conflicts" and errors in pupil-teacher assignments.

This grinding twice-a-year process is typical of several school paperwork problems that can now be solved by business machines. Of equal importance is the fact that the same machines can also be applied to the solution of other routine school operations. For example, at Nyack, New York, a single clerk can handle the creation of report cards, attendance records, posting of permanent records, and scheduling. It will be feasible to add census reporting, payroll records, and records of supplies and perma-

nent fixtures. It will even be possible to use the installation for correlating test data. And all these detailed operations can be handled by one person!

### How the scheduling works

The Nyack Junior-Senior High School has 1,300 students—900 in high school, and 400 in junior high school. On entering high school, each pupil develops, with the assistance of a guidance director, his four year program. Well before the opening of each term, the student is instructed to select his subjects for the following semester. At this point, the new system goes into play. The student marks his choice on a *punched card*, and the cards are sent to the guidance department for review and approval. Since Nyack uses homogeneous grouping in many of its courses, the guidance staff codes each student's card for the particular section in which he will be enrolled for each subject. The cards are then sent to the IBM machine room where they are punched.

Next, a total is taken of all re-

quests for each subject through the use of an automatic card-counting device. These totals establish the "demand" for each subject and simplify the administration's preparation of the master schedule for the whole school.

The master schedule, when prepared, shows the subject, teacher, number of students per class and room assignments (*see Exhibit 1*). At this point, a new punched card is created for each subject on the schedule. These master cards are filed. Behind each master card, a subject card is filed for each student who has elected to take a given course. For example, if 137 students have elected to take English 9, that number of cards is placed behind the master subject card.

### Starting to schedule

At this point, it should be noted that no child has been assigned to any teacher or any class. During the summer months, when all failures, drop-outs, and new registrants have been processed, actual



From his desk, Dr. J. C. Witter, Superintendent of Schools, Caney, Kansas, is in instant two-way conversation with teachers.



Teacher saves steps; she answers calls from any point in room. Call from principal is announced by bright red privacy light. Teacher can also call principal.



Portable amplifier and loudspeakers provide P.A. facilities for the auditorium, gym and athletic field . . . including announcements to spectators.

### For schools with low-budget problems

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Caney, Kansas, schools get all the many features of expensive console sound systems with simplified, low-cost Executone intercom. This inexpensive, all-purpose system saves time and energy for teachers and principal, increases administrative efficiency. Schoolwide announcements can be made from the principal's desk. School programs, recorded music, speeches, special events, emergency dismissals, every form of sound system transmission can reach all school areas, as well as individual classrooms.

#### You get these plus advantages with Executone:

- **Lower Cost**—Expensive console features now possible with new simplified wiring circuit.
- **Easy to Operate**—No complicated, confusing control panels.
- **Easily Installed** in existing schools. In new construction, additional savings possible on wiring.
- **Small Initial Investment**—Starting with intercom, schools can add sound system features as required.
- **Space Saving**—Principal's compact control station needs only small fraction of space required by console.

**More time for teaching!** Teachers like the system. It saves them steps, time and energy . . . so students benefit, too! Find out what Caney schools have learned . . . how Executone School Intercom can improve *your* school administration. Just send coupon for more information.

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 Complete details on Caney Schools' communication set-up  
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	221	137	213	229	214		112	29	31	136		25
	Miss Anderson	Mr. Diamond	Mrs. Giles	Miss Paulus	Mr. E. Payne	Dr. Boddy	Miss Ross	Mr. Templin	Mr. Wray	Mr. Elihard	Miss MacLaran	
1	Eng. 11 B 31	Eng. 9 137	Eng. 7 213	Prep. & Con. 214	Eng. 8 214	Eng. 12 A 112	Study Hall Aud.	Eng. 10 B 29	Prep. & Con. 29	Reading 136	Speech 25	
2	Eng. 10 B 22	Prep. & Con. 213	Eng. 7 Aud.	Study Hall Aud.	Eng. 8 214	Supv.	Eng. 9 137	Eng. 10 A 29	Eng. 11 C 31	Reading 136	Study Hall 229	
3	Prep. & Con. 137	Eng. 9 22	Prep. & Con. 22	Eng. 10 B 22	Prep. & Con. 112	Eng. 12 B 214	Eng. 9 214	Prep. & Con. 31	Eng. 11 A 31	Reading 136	Speech 25	
4	Eng. 11 B 31	Eng. 9 137	Lunch	Eng. 9 213	Study Hall 227	Eng. 12 A 112	Prep. & Con. 29	Eng. 10 A 29	Study Hall 215	Reading 136	Speech 25	
5	Eng. 10 B 22	Lunch	Eng. 8 214	Eng. 7 213	Lunch	Supv.	Eng. 9 137	Eng. 12 C 29	Eng. 11 A 31	Reading 136	Coaching	
6	Lunch	Eng. 9 137	Eng. 7 213	Lunch	Eng. 8 214	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
7	Eng. 10 B 22	Study Hall Aud.	Latin 1 29	Eng. 7 213	Eng. 8 214	Eng. 12 B 112	Eng. 9 137	Supv. (Adult Ed.)	Eng. 11 B 31	Reading 136	Speech 25	
8	Study Hall 32	Eng. 9 137	Eng. 7 213	Eng. 9 130	Eng. 8 214	Prep. & Con. 31	Eng. 10 C 29	Eng. 10 A 29	Eng. 12 B 112	Prep. & Con. 31	Coaching	
ENGLISH DEPARTMENT												
READING      SPEECH												

**Exhibit 1:** The master schedule shows the subject, teacher, number of students electing a course but not the actual number of students assigned to each period. Detailed scheduling is ready to begin.

registration begins. Sorting machines do the job. Since certain subjects are given fewer times a day than others, student requests for these subjects are the first ones assigned. This procedure is repeated from least to most-offered course, until the last student request has been assigned. Thus, students have been scheduled by a priority arrangement and conflicts have been resolved as they appear.

When this process is completed, the cards are resorted and a tabulating machine automatically prints an individual daily program for each pupil (see Exhibit 2). These programs are distributed to each student on the first day of school. Next, the cards are resorted by teachers to produce a class list for each subject given. These are distributed to teachers at the same

time the student programs are released (see Exhibit 3).

Actually, both these schedules are prepared *before* school begins.

In addition to the class list, the teacher receives an individual punched card for each student. Produced as an automatic by-product of the scheduling operation, these new cards will be used for creating report cards for three marking periods during the following term (see box, page 44 for details).

#### Cost of the system

The machines used in the system are rented for about \$400 a month. The salary of the machine operator will vary from community to community, but—in general—the salary of this person can be estimated as only slightly above the going rate in any town for a competent clerical worker. IBM provides

a free four-week training course for the individual assigned to the job.

Since the administrative department of the Nyack school had spent a good bit of each summer, hitherto, scheduling the next year's classes, the time-saving has been substantial. In addition, the saving of 10 days per year of teacher time, previously used in the scheduling process, justifies the annual cost of the equipment. The important dollar savings, however, will accrue as new applications are added.

#### Further use of equipment

According to Mr. K. P. MacCalman, Superintendent of Schools, two new important applications will be added in the Fall of 1957. The first of these will be attendance accounting, a requirement for New York state aid. Mr. MacCalman

PRINCIPAL	NYACK HIGH SCHOOL INDIVIDUAL DAILY PROGRAM				
STUDENT'S NAME GARRABRANT DOUGLAS	32750	GRADE 9			
PARENT'S NAME		PHONE NO.		LOCKER NO.	
SUBJECT TITLE	SUBJ. SYM.	ROOM NO.	PER. NO.	TEACHER	
HOME ROOM	HR	026	00	370	
PHYS ED W F	PE	784	01	230	
STUDY HALL MON TUE	SH	144	01	260	
ELEM ALGEBRA	MEA	129	02	470	
STUDY HALL	SH	144	03	360	
ENGLISH 9	E9	213	04	450	
LUNCH	WAG		05		
SOC ST 9	SS9	128	06	520	
LATIN 1	LL1	029	07	190	
GEN SCIENCE	SGS	210	08	180	

Exhibit 2: The individual daily program for each pupil is produced as a by-product of scheduling. Each child gets a copy.

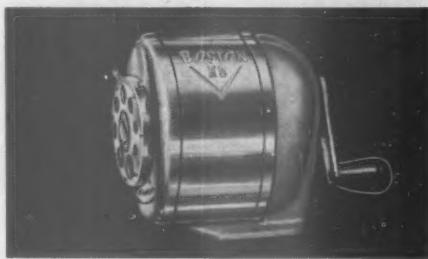
NYACK HIGH SCHOOL					
CLASS LIST AND SCHOLARSHIP REPORT					
TEACHER	SUBJECT	ROOM	PERIOD		
TEYLIN	E10A				
STUDENT NAME	PER 1-4 GRADE DATE REPT	PER 5-8 GRADE DATE REPT	PER 9-12 GRADE DATE REPT	REMARKS	
ACKERSON BETTY	8				
BERNE MARY ELLEN	8				
BONKS NORMA GENE	7				
BRADSHAW JAMES	7				
BROWN WILLIAM	6				
CACCIAIANI MARY ANN	6				
CALLAN JOHN	6				
CANT ELIZABETH	11				
CHFRECWICK PAUL	10				
CHURCH GARET	8				
COOPER JUDITH	10				
COYLE MARGARET	7				
CROWD BRENDA	7				
CYHORE JOHN	6				
DEC GEORGIA	8				
DEFD MARTHA	10				
ESBAY MICHAEL	6				
FERGUSON CAROLE ANN	7				
FIX FREDERICK	7				
FLEMING REGINALD	6				

Exhibit 3: The class list, delivered to the teacher before school opens, is automatically produced by machine.



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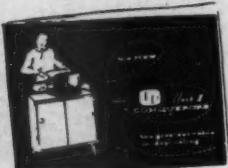


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expects State approval to replace the manually kept class register with a machine record. The second application will be to produce, by machine, a permanent record for each student. In both cases, the new records will be completely machine created as a by-product of

the school's report card system.

A comprehensive brochure which describes the application of punched card methods to school operations is available by circling number 195 on the Reader Service card bound into this issue.

## Report Cards Produced By Machines

NYACK HIGH SCHOOL		STUDENT REPORT CARD		NYACK, NEW YORK	
MAILED	TO				
REPORT OF	LAWYER NAME	STUDENT NAME			
SUBJECT	TEACHER				
None Room	PUGH				
PHYS ED W F	MENZ				
SOC ST 9	BROKKE				
ENGLISH 9	ROSS				
ELEM ALGEBRA	PUGH				
GEN SCIENCE	HULBERT				
LATIN 2	CALLAHAN				
NOTE: SYSTEM OF GRADES EXPLAINED ON REVERSE SIDE					
PUPIL'S GRADES		STUDENT NO.	PUPIL'S PROGRESS		
TERM	YEAR	3 4 5 6 7	TERM	YEAR	3 4 5 6 7
GRADE	MARKS	GRADE	MARKS	GRADE	MARKS
1	1 2 3 4 5 6 7	1	1 2 3 4 5 6 7	1	1 2 3 4 5 6 7
2	1 2 3 4 5 6 7	2	1 2 3 4 5 6 7	2	1 2 3 4 5 6 7
3	1 2 3 4 5 6 7	3	1 2 3 4 5 6 7	3	1 2 3 4 5 6 7
4	1 2 3 4 5 6 7	4	1 2 3 4 5 6 7	4	1 2 3 4 5 6 7
5	1 2 3 4 5 6 7	5	1 2 3 4 5 6 7	5	1 2 3 4 5 6 7
6	1 2 3 4 5 6 7	6	1 2 3 4 5 6 7	6	1 2 3 4 5 6 7
7	1 2 3 4 5 6 7	7	1 2 3 4 5 6 7	7	1 2 3 4 5 6 7
8	1 2 3 4 5 6 7	8	1 2 3 4 5 6 7	8	1 2 3 4 5 6 7
9	1 2 3 4 5 6 7	9	1 2 3 4 5 6 7	9	1 2 3 4 5 6 7
10	1 2 3 4 5 6 7	10	1 2 3 4 5 6 7	10	1 2 3 4 5 6 7
11	1 2 3 4 5 6 7	11	1 2 3 4 5 6 7	11	1 2 3 4 5 6 7
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PER CLASSROOM

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SCHOOL BUDGETS!

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Based on actual school records, these booklets present factual information that tells how Dunham-Bush Vari-Vac Schoolhouse Heating pared a \$6800 annual fuel bill to \$5000; how Dunham-Bush Vari-Air System for schoolroom heating, ventilating and cooling, can save up to \$500 per classroom in construction costs.

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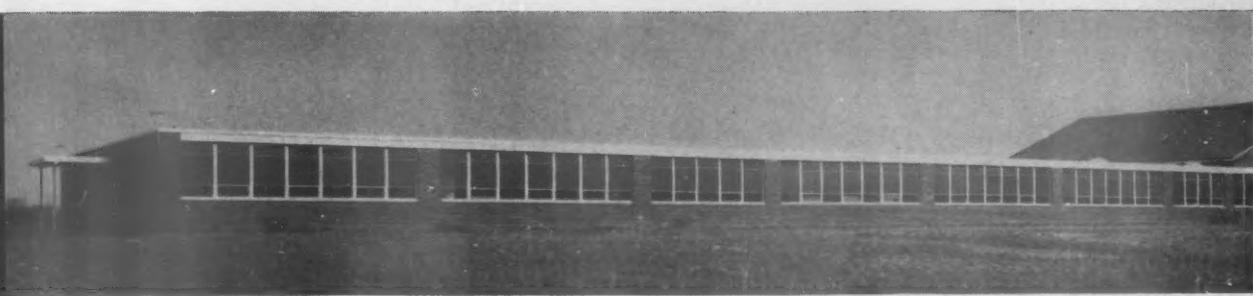
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CITY.....

ZONE.....

STATE.....





Fowlerville High School, Fowlerville, Michigan, is designed with interior load-bearing masonry walls and Fenestra Acoustical-Structural "D" Panels to reduce structural steel requirements to a minimum. Total costs for this 41,000 square foot school were approximately \$11.00 per square foot . . . an economical

figure for high school construction in this area.

Architect: Louis C. Kingscott and Associates, Inc., Kalamazoo, Michigan.

Contractor: Vandenburg Construction Co., East Lansing, Michigan.

## How Fenestra\* Acoustical-Structural Building Panels

### SAVE STRUCTURAL STEEL IN SCHOOL CONSTRUCTION

Spanning between interior masonry bearing walls, Fenestra Panels practically eliminate structural steel and reduce foundation and footing requirements. Schools using this basic structural system have been built in many different areas at costs from \$9.00 to \$12.00 per square foot depending on mechanical facilities, interior trim and accessories.

Fenestra Acoustical-Structural Building Panels form the structural roof deck and the finished interior ceiling complete with "built-in" acoustical treatment. They replace five different materials—usually requiring extra labor and costs—with one building unit, erected in one operation by only one trade.

The unique cellular design of Fenestra Building Panels makes them strong enough to span up to 31 feet under normal roof loads. They also provide lateral bracing for the bearing walls. Their width—24 inches—fits perfectly with modular design techniques. This speeds up construction and eliminates cutting and fitting of panels and other materials on the job.

To provide the acoustical ceiling, the flat bottom

surface of the panels is perforated. An exclusive Fenestra arched, sound-absorbing batt that produces a noise reduction coefficient of 80% is enclosed *inside the panels*. It cannot be harmed by painting or maintenance cleaning. There is no "stuck on" material to discolor or fall off and require replacement. And, because this plate is a part of the structural panels, it is made of 16-gauge steel—4 times thicker than the usual metal pan ceiling construction. This assures extra resistance to damage by objects thrown against the ceiling or other impacts. Room-to-room noise flow is prevented by sound transmission barriers incorporated into the panel design.

If you are now planning a new school building, you should get complete details on Fenestra Acoustical-Structural Building Panels and the new school design concepts possible with them. The New 1957 Fenestra Building Panel Catalog gives you complete information. Mail the coupon below, today, for your FREE copy or call your Fenestra representative.

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*A monthly review of ideas, new products and helpful hints*

► **Temporary classrooms in development houses**

The school board in Newark, Delaware, hopes to purchase or rent houses for temporary classrooms to ease their space shortage. They are proposing a bill for the state's General Assembly that would permit them to rent or purchase small residential buildings which could supply two or three classrooms each. The proposal would call for a developer to provide houses without interior walls. Money would come from the building fund. When the emergency is over, proceeds from re-sale would go back to the building fund. At that point, the developer could add interior walls for home buyers.

The plan is strictly an emergency measure. The school district's building program does not provide any new classrooms for this Fall. It does provide some in 1958. If enrollments this Fall are greater than available facilities, the plan would be put into use.

► **District recommends special building to house administrative staff**

With its school population now over 3500, Whitesboro Central School District, in New York State, is after a special administration building to streamline its operations.

In a message to district residents, School Board President Henry Doughty outlines the proposition this way:

"The Whitesboro Central School District has become so large that an administration building should be provided. We think it unwise to provide for the general administration of your school district in your present junior-senior high school. We think that your architect will show you that at least it will cost no more to construct such a building than to provide the space in a new or existing building. As your district continues to grow, you will find greater need for a separate administration building."

The new administration building, estimated to cost \$68,000, will include offices for the board of education, the supervising principal, and the clerk

of the school district. In addition, a central guidance office would be provided. The present school board rooms in the senior high school building will become high school guidance offices.

► **Students cut bus budget**

School officials in North Carolina have found a solution for the problem of transportation cost. Every day, a half-million youngsters have to be transported to and from school by a giant fleet of school buses. But the school budget allows for a base pay to school bus drivers of only \$22 a month. It's practically impossible to get qualified drivers with that pay. So school officials turned to their student body for help, and got it. Teen-age drivers now handle practically the whole operation and statistics prove that they're doing a first-rate job of it. In fact, the over-all accident rate has gone down thirteen percent.

The success of the program, according to Wallace Hyde, in the state's department of motor vehicles, stems from the well-defined driver-selection procedures, followed up by intensive training, close supervision and periodic inspections.

► **Experiment simplifies scheduling of junior high classes**

In Allentown, Pennsylvania, junior high school students used to spend a lot of time trooping from classroom to classroom. They'd see five or six teachers a day for 50 minutes. All of that is changed now. Each of the city's four junior high schools is experimenting with a new system where the youngsters see only three teachers and spend twice as much time with each of them. Here's how the new system works: one teacher covers English, reading, spelling, literature, library and research. The second teacher handles history and geography, government and current events, conservation and other allied subjects. The third teacher specializes in mathematics and science.

The three teachers get the same 90 pupils, divided into three classes of 30 pupils each. And classroom periods run

120 minutes. This gives the teacher time to get to know each youngster and to give individual attention to the ones who need it.

On top of that, the teachers work together. If one teacher is going to give a major test, the other two won't schedule tests on the same day. In other words, one teacher knows at all times what the other two are doing, because the three get together every afternoon and plan the next day's work.

This planning works out very well for the student. If one teacher is stressing the Civil War, the other two will gear their teaching toward the same period. This gives the youngsters a rounded concept of how one subject ties in with another.

The system has proved to be so popular with students and school officials alike that next year the 7th and 8th graders will be taught the same way.

► **Two prize-winning ideas feature use of sound in school**

Two Junior High School principals in Michigan and Texas today were named grand prize winners of a "Sound in Schools" contest conducted for the nation's teachers and school executives by the Radio Corporation of America.

John L. Arkwright's prize-winning entry (from Alice, Texas) described an application of sound to administer an eight-hour test simultaneously to 370 ninth-grade students.

"We were confronted," Mr. Arkwright explained, "with the problem of having insufficient space to assemble our student body at one time. To give the test to the students in their 12 homeroom sections required an expenditure of 96 man-hours by the test administrator. We solved this problem by having the test administrator broadcast test instructions over our sound systems simultaneously to the 12 ninth-grade homerooms, each of which was under the supervision of a teacher."

"Through the use of our sound sys-



L-O-F Daylight Wall in The Country School, Weston, Mass. (Incidentally: as a safety feature, this school specified L-O-F Tuf-flex tempered plate glass for its gymnasium and corridor.) Architects: Hugh A. Stubbins & Associates, Cambridge, Mass.

## *Psychology and sunshine*

**... FOR HEALTHY, HAPPY SCHOOLS**

*some thoughts on school design by Libbey • Owens • Ford Glass Company*

Before you meet with your architect on planning a new school, it would be wise to brush up on your child psychology. For it's well to look at your school as a psychologist would and consider how it will look and feel to the youngsters who will use it.

Will the entrance reveal what's inside and welcome them? Or does a dark, foreboding doorway wait to swallow them up?

Are the hallways bright and sunshiny, with

big windows that let you see out? Or are they dark and dreary tunnels?

Are the classrooms full of daylight and open to the sky and trees to create a feeling of freedom? Or will eyes be strained and the children feel closed in?

It makes sense psychologically to use large areas of clear glass throughout your school. And it makes sense *economically*.

For the primary source of classroom light is

*(continued on overleaf)*

**L-O-F  
GLASS**



L-O-F Daylight Wall in Unit #5 of the Mason Consolidated School, Erie, Michigan.  
Architects: Jahr-Anderson Associates, Dearborn, Michigan.

natural, cost-free daylight. And nothing brings in *more* daylight than *clear, flat* glass. No other form of glass is so transparent.

A Daylight Wall (clear glass from sill to ceiling) is made even more important by the fact that most of the United States is cloudy or overcast most of the year. (See the weather map.) And the cloudiest months are school months.

Besides "psychology and sunshine", there is another element to consider when you build a school: that's the contribution of large areas of glass to the architectural beauty of your buildings. After all, your school is a key building in your community. It should certainly look as contemporary as the newer homes, stores, and other buildings in the community.

Look over the following list. These are the kinds of glass that can help answer all of these school needs.

#### KINDS OF GLASS FOR SCHOOLS

**PARALLEL-O-PLATE®**—recommended for entrances and any other glazed areas where beauty and maximum freedom from distortion of vision are primary considerations.

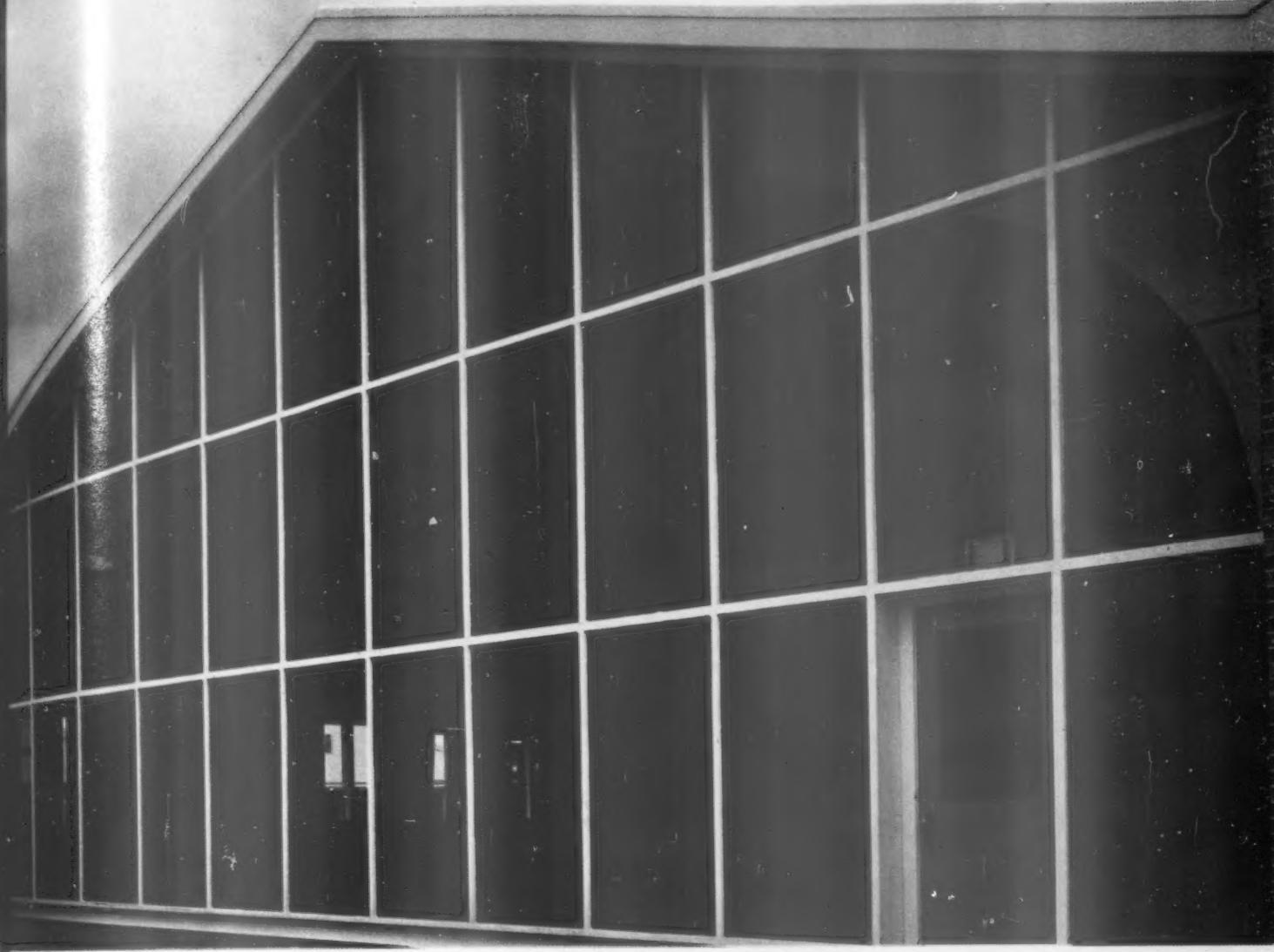
**THERMOPANE®** insulating glass—recommended for all windows wherever its insulating properties would result in substantial fuel savings in winter.

**TUF-FLEX®**—this clear, tempered glass is recommended for gymnasiums, entrance doors and side lights, areas facing playgrounds . . . any area where youngsters or missiles are in rapid motion.

**VITROLUX®**—this opaque colored glass is recommended for its functional and decorative effect either inside or as a facing material on the exterior.

*(Pictures and further details on the back of this insert.)*

Lo  
GLASS



This great wall of L-O-F Thermopane insulating glass helps keep State Street School, Westerly, Rhode Island, comfortable on even the coldest winter days. Architects: Harriman, Willis & Hayden, Boston, Massachusetts.



## PARALLEL-O-PLATE®

Cast a critical eye on the reflections of the upside-down signs in the mirror of conventional plate glass (left) and the mirror of *Parallel-O-Plate* Glass (right).

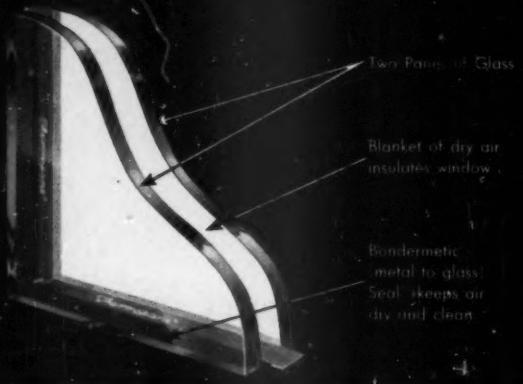
*Parallel-O-Plate* Glass is much more distortion-free than ordinary plate glass because its surfaces are more parallel. And that's because of L·O·F's *twin-grinding* process in which both surfaces of the glass are ground simultaneously. Freedom from distortion is especially important in large glass areas for architectural beauty and clarity of vision.

THIS IS PLATE GLASS  
THIS IS L·O·F PLATE GLASS

THIS IS PLATE GLASS  
THIS IS L·O·F PLATE GLASS

THIS IS PLATE GLASS

THIS IS L·O·F TWIN-GROUND  
PARALLEL-O-PLATE GLASS



## THERMOPANE®

*Thermopane* insulating glass puts two panes and a sealed-in blanket of dry, clean air between the children and the outdoors. Drafts are reduced so rooms are more comfortable, especially for children sitting close to the windows. *Thermopane* even deadens outside noise that could distract the class. And the heat loss you would get through single panes is cut almost in half.

## TUF-FLEX®

Here you see a half-pound (1 1/8" diameter) steel ball, dropped from a height of ten feet, bouncing harmlessly off 1/4"-thick *Tuf-flex* glass. *Tuf-flex* is 3 to 5 times stronger than regular plate glass of the same thickness. If maximum resistance is reached, *Tuf-flex* disintegrates into relatively harmless, rock-salt size particles instead of big jagged pieces.

## VITROLUX®

Rich color, fused to the back of this clear, heat-strengthened plate glass, adds youthful beauty and cheerful character to your school. Used instead of masonry as an exterior facing material; also for interior partitions. Natural resistance to weathering, crazing and checking. Standard maximum size of *Vitrolux* panels is 48" x 84". Special orders up to 60" x 84". Thickness 1/4" plus 1/64" minus 1/32".



*Glass*  
FOR SCHOOLS

Send coupon for your free copy of our book *How To Get Nature-Quality Light for School Children*. Complete. Authoritative. Packed with facts. Valuable for anyone interested in the design of school buildings. Mail the coupon.

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608 Madison Avenue, Toledo 3, Ohio

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City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

LIBBEY·OWENS·FORD GLASS COMPANY

tem, we completed our testing program in two days, instead of two weeks. Also, our test results undoubtedly are more valid since all students were tested simultaneously."

Lowell E. Grant's award-winning entry (from Flint, Mich.) described the many ways his school uses its sound system to supplement in-school teaching "by bringing the right kind of radio programs into the classroom.

"The proximity of an educational radio station," he pointed out, "makes a school sound system as valuable and as essential to modern education as books, a library, or other modern educational tools. Virtually limitless is the range of informative, interesting radio subject matter which can be introduced in the classroom via a school-wide sound system. The sound system also provides the teacher with a chance for closer observation of individual children, their listening habits, their ability to comprehend, and their special interests. The teacher has a rare opportunity to analyze pupil reaction and provide for individual differences."

► **School board meets with teachers to improve mutual understanding**

Few school board members set foot in a school room during school hours, let alone volunteer to sit down with teachers and listen to their gripes. The board of education in Montclair, New Jersey, whose members include a lawyer, a book publisher, an engineer and two housewives, are trying to change this situation. All firmly believe that two-way communications must exist between board members and teachers.

As a starter, the Montclair board literally went to school. In one three-hour session, the five-man board took what amounted to a refresher course in the history, purposes, curriculum and objectives of junior high schools. The instructors were junior high school teachers. This type of training of board members was repeated by other schools.

But the heart of the Montclair program is the informal meetings between school faculties and board members. These are held at night and provide both sides with an opportunity to work out problems on a face-to-face basis. The teachers are encouraged to discuss the good and bad features of their jobs, as well as to tell what they want and need to do their jobs better.

The president of the school board feels his group has come a long way toward establishing a partnership in the operation of the schools among the board, the administrators and the public. "But," he says, "until we admit teachers to that partnership, our success will be limited."

► **School district kills door-to-door selling**

Since the day, two years ago, that five high school seniors knocked on the same door in Winder, Georgia, selling doughnuts, door-to-door selling, or any other kind of student soliciting, has been banned. "We haven't deviated at all from the policy the board set in October, 1955, and we're glad of it," says Winder Superintendent of Schools D. F. Osborne.

Winder pioneered in licked a problem that has gotten out of hand in many school systems. The "watchdog" committee of the Georgia Association

of School Administrators recently (in May, 1957) recommended a drastic cut in the number of school charity drives. Said the group in a report to Georgia's State Board of Education:

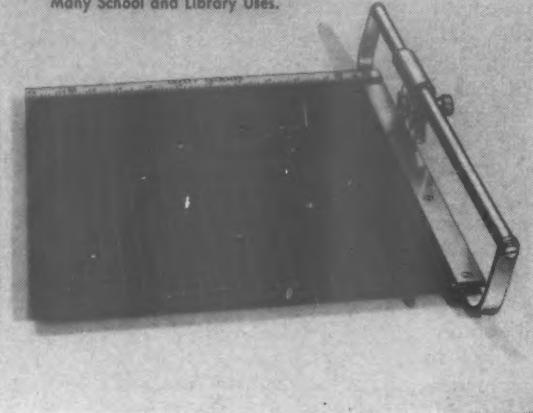
"Too often excessive pressures are placed on students to contribute . . . (and) on the school administration and the teachers to meet quotas."

The committee suggested a maximum of three drives per year per school. M. S. McDonald, who presented the group's findings to the state board, said there are as many as 15 or 20 drives annually in some schools.

The committee also recommended:

**Gaylords' Safety Paper Trimmer**

New Type Trimmer Has Many School and Library Uses.



**Clean, Accurate Cuts Assured**

**With New Type Rotary Cutting Wheel**

Recommended for schools and libraries . . . cuts paper, cloth, light board easily. Check these important features:

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Round cutting wheel is well-guarded; no heavy dangerous blade to lift; finger-tip operation.

Precision tooling and rigid inspection insures a cutting accuracy of an unusual degree.

Revolving cutting wheel maintains sharp edge through years of use.

Aluminum base construction provides extreme lightness for ease in handling.

No. 812 12" cutting edge . . . . . \$15.85  
No. 820 20" cutting edge . . . . . 33.50

Immediate shipment on all orders. Transportation charges paid.



SAFE TO USE  
clean edge assured



CONTOUR CUTTING  
easy, accurate operation



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1. A deadline before the opening of the school year for considering applications from fund-raising organizations.
2. An advisory citizens' committee to screen applications.
3. Priority for united fund campaigns.
4. Rotation of worthwhile causes.
5. No quotas for schools or individuals.

The committee paid its respects to the value of charity groups, but complained that "the emphasis . . . is placed almost exclusively on the gathering of funds rather than the education of students about the nature of the problems and needs for which the funds are solicited."

The Winder case history, in the opinion of Superintendent Osborne, shows that not only charity drives, but all sorts of money-making schemes as well, can be abolished *without harm to the activities concerned* and with great benefit to the schools' number one job: teaching and learning.

"I actually believe," he says, "that organizations like the Red Cross and the polio foundation have been able to raise more money in Winder since we put our ban into effect than they did before."

This is how he explains it: an adult solicitor might have been turned away before with the excuse, "Oh, we gave through our child (or children) at school." Maybe they did, but the donation probably was a dollar or two at the most. Now, with no such out, they dig deeper and contribute five dollars or more.

The doughnut-peddling seniors, whose zeal brought things to a head in Winder, happened to be raising money for their class trip to Washington. Now, Winder seniors just don't take a trip.

Perhaps they miss an educational experience, but their last pre-college or pre-career year of school does go along with fewer interruptions and more concentration on the academic.

Essential expenses formerly met by selling garden seed, or light bulbs, or what have you, are now paid by the school board from tax funds. Once frills were eliminated, the extras didn't add up to a burdensome total, nor does austerity reign in Winder schools.

Mr. Osborne says that representatives of outside enterprises still come around wanting students to sell such items as fountain pens and even ant poison for a profit. "I just tell them we don't sponsor anything or sell anything," he says. Winder organizations have long since become accustomed to the rule and accept it in good grace. The first year was the hardest, but the superintendent and the board got

through it just fine by backing each other to the hilt.

"It is amazing," says Mr. Osborne, "how much time and effort have been salvaged. Biggest time-saver of all: we just don't have any money to count."

#### ► Educators try brainstorming to solve district problems

An innovation that has gained acceptance in industry is being tried this summer as an experiment by 25 principals and supervisors in the Greenwich, Conn., schools. A three-day workshop is held at the conclusion of the school term, to discuss various continuing problems as well as new

ones that cropped up during the year. This year "brainstorming" is being introduced as part of the program.

This technique calls for spontaneous and uninhibited suggestions from any member of the group. Businessmen who have used the method say that the free discussion often stimulates fresh approaches that suggest valuable solutions.

Several good texts on the subject of how to handle a brainstorming session have appeared in the last few years. Among the best of them is a series written by Alex F. Osborn of Batten, Barton, Durstine, & Osborn, and published by Charles Scribner's Sons.



You may remember this picture that illustrated an advertisement we ran back in early summer. When we photographed the kids, wide vistas of a long summer of unregimented fun danced in their eyes. You just couldn't see the Fall through the haze of swimming, fishing, camping, playing.

But time came around . . . swiftly, inexorably. The day came when the school bell shrilled its dirge. And classes, as they must to all kids, enveloped them in blackboards, potted plants and primers.

On the right are the same kids. We thought we'd better tell you. You'd never know it.





our catalog in  
Sweet's  
write for copy

## THE LONG ROAD BACK

Ask any kid. The only thing shorter than one summer vacation is the next one. In between is a long, dreary business that stretches endlessly through the year. The only consolation—it won't last forever.

That new school has to last, though. And we can vouch for the entrances. When these kids' youngsters

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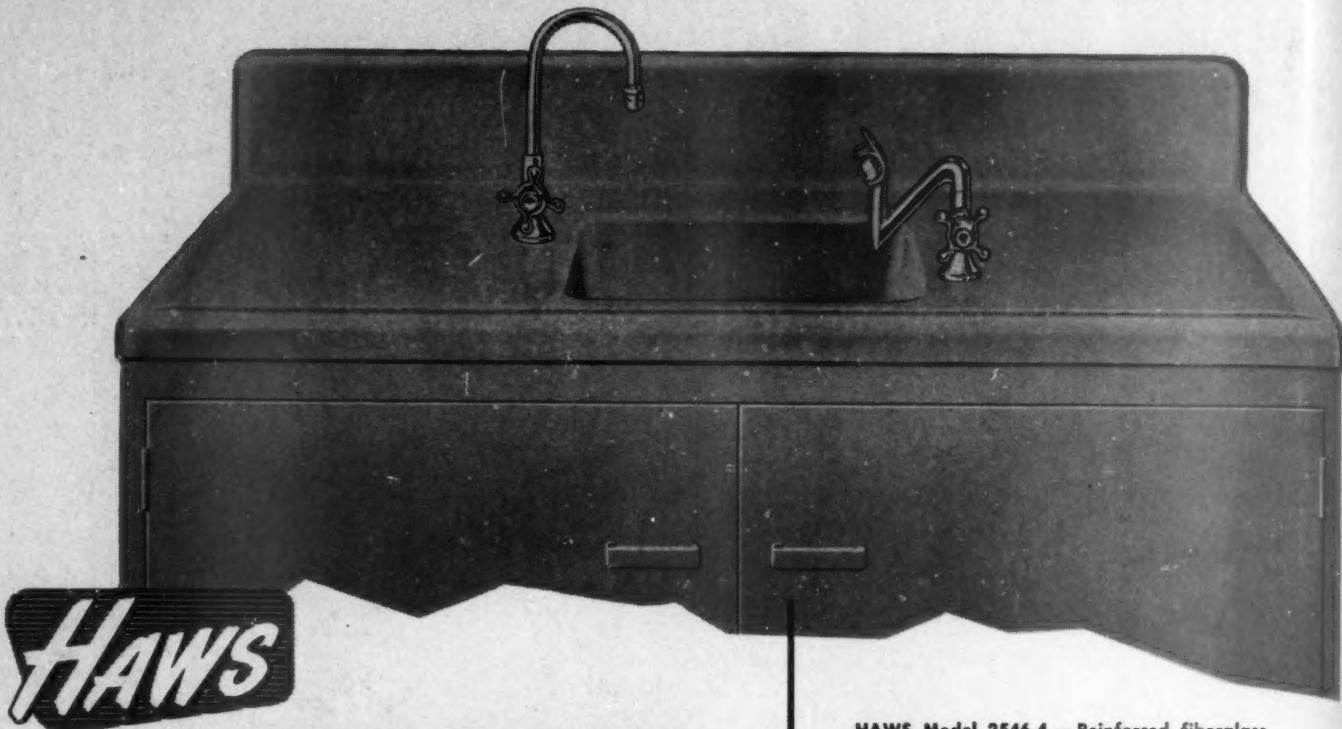


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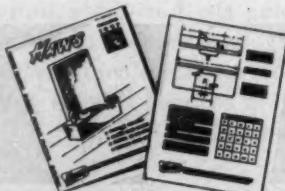
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HAWS Model 2546-4 — Reinforced fiberglass, one-piece deck-top and receptor in color. HAWS Model 414A aerated gooseneck faucet at left, and Model 2N sanitary drinking faucet at right — both VANDAL PROOF mounted.

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# How to cut the cost of serving MILK

A group of Wisconsin schools turned to bulk milk dispensers for the answer. Here, in a detailed report, are their findings.

■ ■ ■ BULK MILK DISPENSERS have always been a logical way to speed the handling of food and increase milk consumption in schools. But until about two years ago dispensers could not be used in many areas because no machine could be found that would satisfy all state health department requirements. Now dispensers have progressed to the point where they are generally approved by health departments, and schools across the country are using them as an efficient—and less costly—way to provide plenty of reliably refrigerated milk.

In late 1956 the Paper Cup and Container Institute conducted a survey in Wisconsin which included visits to some 30 schools and an extensive study of 16 that had used dispensers for periods of six months and longer.

Since the time when dispensers were installed, the schools studied have increased their average daily consumption of milk from 39 half-

## Highlights

1. *Installation of bulk milk dispensers is always followed by a distinct increase in milk consumption.*
2. *Bulk milk costs from  $\frac{1}{2}$ ¢ to  $1\frac{1}{4}$ ¢ less per half-pint serving than packaged milk (in Wisconsin).*
3. *Milk dispensers are an efficient way to serve milk and offer no operating problems.*
4. *Disposable paper cups, cone-shaped or flat-bottom, provide assured sanitation and can be handled satisfactorily by children of all grade levels under all serving conditions observed.*

pint servings per 100 students to 90—a gross gain of 130%.

With the many factors bearing

on milk consumption in schools, it is not possible to credit dispensers alone with this large increase. Some schools, however, adopted dispensers under conditions that made it possible to see the gains directly attributable to the new equipment.

The Oak Grove Elementary School, for instance, reports 221 half-pints consumed daily in May 1955. A dispenser was put in place in the following school year and by November, 1956, volume had risen by 83% to 404 half-pints. Average enrollment had remained steady.

The East School in Baraboo likewise reports a rise of 45% in consumption between 1952 when a dispenser was installed and early 1954, school population again remaining about the same.

The Lodi schools also experienced an increase of 83% in per capita consumption in the months following installation.

School authorities said that dispensers, which can be amortized

under the provisions of the federal special school milk program, add to consumption because they provide additional stations at which milk can be obtained—sometimes for longer periods during the day—and because they keep milk cold.

Three of every four of the school systems use dispensers as part of their lunch service. One of every two uses them during mid-morning or afternoon intervals.

**When are dispensers used?**

*Number of Schools*

Noon meal	12
Mid-morning	10
Mid-afternoon	7
All day	4
At start of school	1
At close of school	1

*Note: Figures add to more than 16 schools because some officials listed more than one occasion.*

Most of the schools using dispensers at the noon meal put them right into the self-service line in the school lunch room. When dispensers are used at other times, the machines are most frequently installed in corridors or alcoves off corridors. They are also being used

in all-purpose rooms, study halls, basement facilities and, in one case, in a special dairy bar featuring white, chocolate and malted milk.

The fact that they provide cold milk is especially important in increasing milk consumption in schools. Children are often quick to reject foods that do not measure up to standards observed in their own homes, and schools have traditionally been plagued with the problem of finding sufficient refrigerator space for their daily milk supplies. In a number of the schools the dispensers offered sufficient extra refrigeration capacity to solve this problem completely. In the others five-gallon reserve cans could generally be kept in walk-in refrigerators.

Dispensers were also found to reduce the cost of milk since they permit bulk use rather than distribution in small bottles or cartons. In school systems where prices for milk in bulk and in small containers could be obtained for comparison, savings averaged  $\frac{1}{8}$  cents per half-pint serving.

By using dispensers with paper cups, as 14 out of the 16 schools

are doing, problems of sanitation, labor and storage were also reduced or entirely eliminated.

It was found that the dispensers of all makes being used presented no sanitation problem and had been perfectly reliable in all mechanical functioning to date.

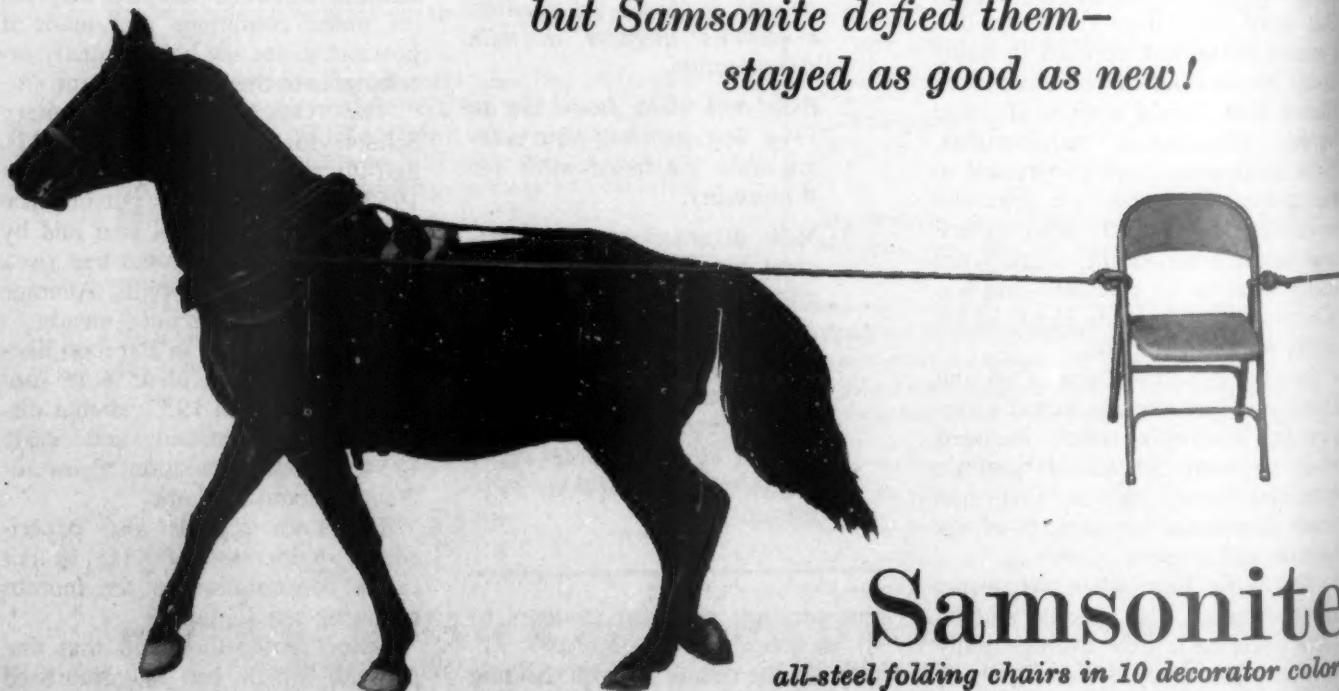
**What about "spilled milk"?**

Some educators in the past have questioned whether dispensers would create problems in filling the cups to a full 8-ounces without overflowing. Thirteen of 15 systems responding to this question stated that there was no trouble with the milk foaming or overflowing. One official said there could be a problem but need not be if the dispenser was handled properly; another said a 10-ounce paper cup allowed plenty of extra room for any foaming that occurred.

Opinions as to whether the dispensers required operators was divided. Eight of 16 respondents use either non-professional help, or a teacher or a student to speed distribution of milk and, especially, to serve younger children. Three superintendents drew a clear line:

## "wild horses" can't break

*Two stallions tried to pull  
a Samsonite folding chair apart—  
but Samsonite defied them—  
stayed as good as new!*



**Samsonite**  
*all-steel folding chairs in 10 decorator colors*

operators in primary schools, self-service in high schools. Some primary school officials insisted, however, that younger children can be quickly trained to handle the serving of their own milk.

Fourteen of the 16 school systems reporting stated that they found no special problems with speed of service in handling long lines of students. Two schools noted that there might be a problem but stated that they have none because their children go to lunch by grades or shifts. One official states that he had a problem until he stationed students to fill cups and dispose of the empty ones. Another gets his lunch-time service off to a fast start by having 25 cups of milk drawn immediately in advance.

#### Service from milk dealers

The survey revealed a high degree of cooperation between milk plant operators and the schools using dispensers. Almost all schools reported that dairies had installed the equipment without charge and in half of the cases the dairies had provided the schools with dispensers without charge or at low rates.

One dairy even furnished paper cups although they represent only a fraction-of-a-cent charge to individual pupils. The schools repeatedly expressed their confidence that the dairies would efficiently handle any repairs that should become necessary, and route men were reported helping daily with the filling of the dispensers.

The machines most commonly used hold two 5-gallon cans. For larger volume locations, dispensers accommodating three 5-gallon cans are often employed. One of the machines provides a cut-off device making it possible to deliver a specified quantity of milk automatically. The great majority of the schools were using equipment without automatic cut-off, however. One was using a coin-operated unit.

School systems vary the sizes and makes of dispensers according to need in their various buildings, with the largest dispenser program using three of the 10-gallon units and four of the 15-gallon size.

Fourteen of the 16 schools used paper cups, one used glasses, and one reported use of clear plastic tumblers. Of those using paper cups,

10 were using cone-shaped cups with holders, three flat-bottom cups and one a combination.

All stated that the paper cups are easily disposed of with normal trash or by burning in the school furnace or in an incinerator.

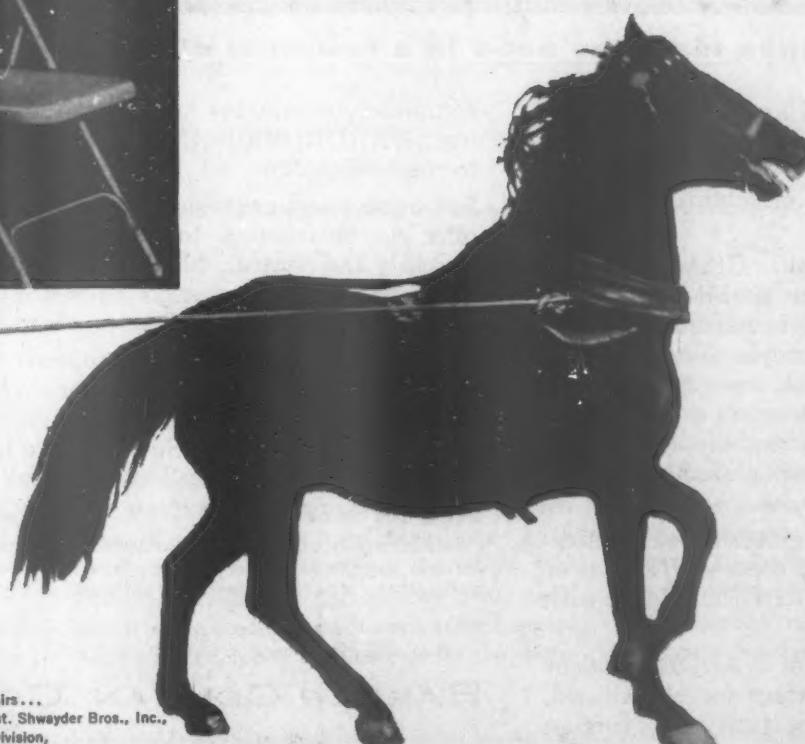
#### Cost of equipment

Milk plant operators have loaned six of the Wisconsin schools the dispensers used, and another rents a dispenser to the school at a rate of 3¢ per gallon of milk purchased.

But most of the schools bought the equipment outright at prices generally running between \$200 and \$300. With the help of the federal school milk program, the Wisconsin schools have been able to complete payments or pro-rating of costs in about a year's time. Cups are also a recognized cost under the school milk program.

The most popular choice, the 10-ounce cone cups, were reported costing in the neighborhood of \$4.00 per thousand, and smaller ones less. Flat-bottomed cups cost \$5.00 to \$8.50 per thousand. Plastic cup holders cost from 35¢ to 50¢; stainless steel, from 63¢ to \$1.00.

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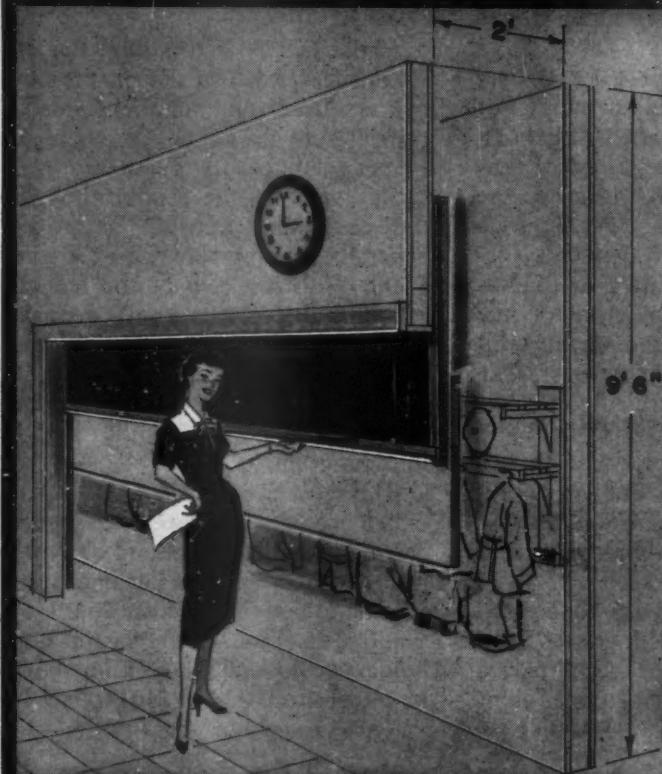
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Important features of the new Barcol WARDROBE door are based on actual interviews with teachers in a range of localities. Here are the advantages teachers say they *need* for efficient classroom management.

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**Double utility.** Upper section of WARDROBE door offers unbroken mounting surface for chalkboard, chalkrail, and tackboard. Firm, sturdy construction

completely eliminates rattle when chalkboard is in use. WARDROBE doors save on building costs, add to room efficiency.

**Full access and control.** Open, WARDROBE doors offer *no* obstruction to pupil traffic or teacher's visibility and control. Many teachers prefer WARDROBE doors for this reason. Absence of pivots and hinges on floor also facilitates cleaning.

**Neat appearance.** Teachers emphasize importance of eliminating cloakroom clutter. WARDROBE doors preserve businesslike, attractive uniformity in class environment. Sections are highly scuff-resistant and have excellent finishing qualities.

#### **Send for Manual**

Contains application photos, detailed drawings, sample specifications, building requirements, and letters reporting users' experience. Free.

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**BARBER-COLMAN COMPANY**

Dept. AC-79, Rockford, Illinois, U.S.A.



# How to use "teaching by telephone" for children who can't leave home

Four years experience with telephone teaching have just been completed in Mt. Vernon, Ill. Here are facts on how any school can educate handicapped pupils at low cost with relative ease.

■ ■ ■ THE LAST WEEK of May, 1957, a swarm of newswriters and photographers descended upon Mt. Vernon Township High School, Mt. Vernon, Illinois. This was the noisy climax to a four-year experiment which had proceeded without fanfare since September, 1952.

Marvin Dempsey Malone had become the first student in Illinois to complete four years of high school by telephone. Graduating with him was Rosalie Anslinger who had obtained all but a few of her credits in the same manner. Both were victims of polio.

Total cost of the program was

negligible (see details in box on this page) in terms of the job that had been accomplished.

## How the system works

These students were able to "attend" school because of a simple classroom device consisting of a small microphone-receiver combination housed in metal box no longer than six inches by six inches by four inches. No dials or switches were necessary for its operation. A similar instrument was located in the home of each student.

The two-way communication was controlled by a third box which

was located in the main office of the high school. As long as the students were taking the same courses, only one speaker and one control box was necessary. Later in the program, when Marvin and Rosalie were taking different courses concurrently, it was necessary to add an additional speaker and an additional control box.

During the first two years, when the students were in the same classes at the same time, the manual duties of the school officials were merely to see that the control box was turned on and that the speaker was transported to the cor-

How  
much  
does it  
cost?

The following detailed breakdown of costs was provided by Howard E. Rawlinson, Guidance Director of the Mt. Vernon Township High School, who also supplied the other factual material in this article. Says Mr. Rawlinson:

"Each home station costs \$7.50 per month and each school station costs \$9.00 per month. There was a one-time installation fee of \$5.00 for the home and \$10.00 for the school. Additional jacks (plug-in sockets) cost \$7.00 each. There is one free jack with each school station (telephone company terminology for the micro-

phone-receiver apparatus). We have one permanent station in the auditorium and the two portable stations. Last year we had jacks in five different rooms. The instruments I referred to as a control box the company calls a 'cut-off switch' and its use is merely to switch the line from station to station. The school district paid the costs and was reimbursed by the State. A separate line was necessary from each home. Originally there was a mileage charge on this which was paid by the Kiwanis, but now the company tells me they no longer make a charge for the line—even for a new one."



**The school's microphone-receiver need not be directly in front of the speaker. It will pick up normal sounds from anywhere in the room. At the student's end, he flicks down a switch in order to speak to the teacher or class.**



rect classroom at the correct time. This problem was easily solved by student help.

The other main problem was the selection of teachers. It was found practical to choose teachers whose voices had a good carrying quality and those who had a natural bent for consideration of the unfortunate.

The school administrators felt that much would be lost if the teacher were to become a disembodied voice to the students, so a practice was made each year of taking the new classroom instructors to visit each of the students before the first scheduled class. These visits did much to make the first few days of instruction easier for both teacher and pupil; many teachers returned to the homes of their own volition on later occasions, and several suggested that the homebound students use the telephone after school hours to clear up difficulties.

[Ed. Most educators believe that telephone education should be regularly supplemented by direct personal contact with teachers. They emphasize the need as being two-fold: first, the child requires individual help as a basic part of his educational program; and, second, it is essential to the student's morale that he get individual recognition. Home visits, they point out, give him a sense of belonging and worth.]

### Fellow students help

Students were encouraged to use the speaker to carry on conversations with Rosalie and Marvin at the conclusion of the regular periods. This practice also helped to make all concerned feel that those on the telephone were actually part of the classes.

The student service system was again called into play in the transportation of written work, problems, visual aids, mimeographed material, tests, etc. There were always more volunteers for these jobs than were needed and each volunteer performed his service faithfully even through the bad winter months. The chief requirements for the volunteers were good attendance records and dependability.

The first real decision on policy came at the time of the first semester examinations. Short quizzes had been sent to the homes in sealed envelopes and returned in the same manner, but the semester examinations were considered to be of much greater importance. The administration felt that it had three choices: to insist that the students come to the school; to send a proctor to the homes; or to use the honor system.

It was decided to try the honor system. The examinations were taken to the homes by the guidance director at the same time as the examinations were scheduled in the

school. They were then either brought back later by the guidance director or returned in a sealed envelope by the parents.

### Extracurricular activities, too

But all was not study and examinations. Soon after the initial installation, the bedside students discovered that they could talk with each other, even with the school installations turned off, since their hook-up was like a telephone "party-line." They spent many long hours working assignments together, discussing future plans, and just carrying on conversation.

They were also able to listen to many extra school events. A speaker had been installed in the high school auditorium, and in the event of a concert, an operetta, a school play, or any other such event occurring at night, the control box was turned on and switched to the auditorium so that the students might share in these activities.

Next year the two children expect to enroll in the Mt. Vernon Community College and to continue to attend classes by telephone.

*For more detailed information on the equipment used in "teaching by telephone", please circle number 196 on the Reader Service Card bound in this issue.*

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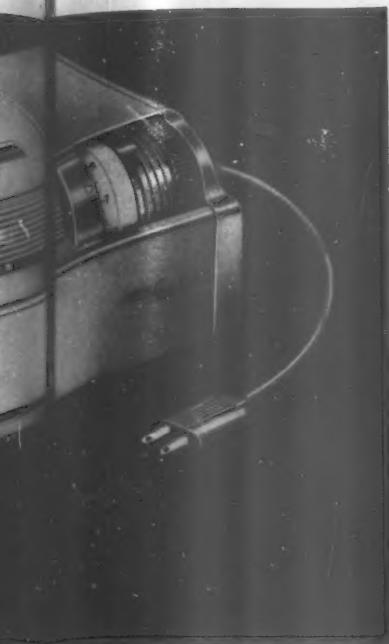


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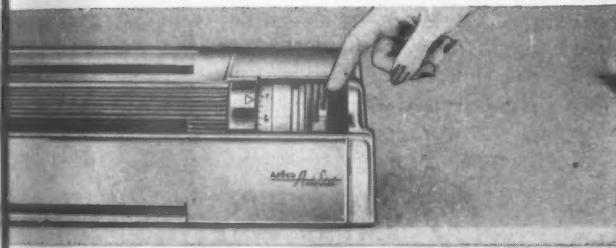
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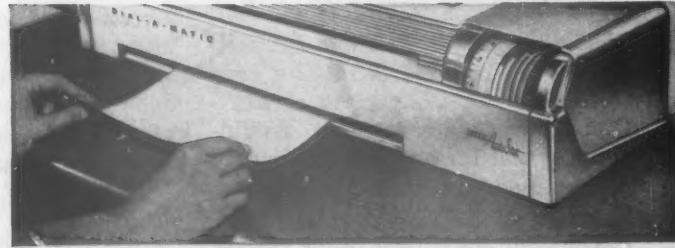
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(Circle number 129 for more information)

## Can a School District Plan Ahead?

continued from page 31

parents of those kids before, because everything was going fine.

**Q.** In other words, things have to be pretty bad to get out the vote?

**A. (HENDRICKSON):** Timing is important, too. You don't want to have an election right before income tax time, or before Christmas. We timed this election for the end of February. It was long enough after Christmas so that people had forgotten about their Christmas bills and they still hadn't begun to think about their income tax in April. I think timing had something to do with all of this.

**Q.** Then would you say that timing was the key factor?

**A.** No, nothing as simple as that. If I had to pin it to any one single thing, I'd say we won because of the personality of our superintendent. Jim Merrihew was the key factor. We had gone through a series of elections with an administrator who, evidently, was not popular with the public. It reached the point where they would not vote for anything that he was for. When Jim came into the picture this year, it made the difference.

**Q.** Let me get this straight. Would you say that for a school district to be successful in arranging for the financing of a new school, the personality and the caliber of the school superintendent is the chief factor?

**A.** It is the key to the situation. Board members enter into it, too.

But the superintendent carries the brunt of it.

**Q** **Mr. Merrihew, as superintendent, I wonder if you could explain how you were able to get the vote out? What did you do?**

**A.** The methods we used have been used in other areas just as successfully. We got people to invite a group over to their house for coffee and doughnuts, for example, and then we sent somebody in to speak to them. I talked to as many as five different groups in one day. We had the full support of our local newspaper, and it carried innumerable stories supporting us. For several days before the election, the paper gave us scare headlines of "be sure and vote yes" on school bonds. We used the doorknob sticker type of thing to remind people to vote. Our main effort was to get people down to the polls. On election day, we had cars to give them rides. We had poll watchers, and in the afternoon we checked for people who were eligible voters but who hadn't come out to vote. We contacted them, to be sure they voted.

**Q.** When you say "groups" do you mean organizations like PTA?

**A.** Indirectly. We tried to cross organizational lines. We didn't use the PTA as the PTA, we used the membership. We didn't want to be backed, necessarily, by the Chamber of Commerce, but we liked to

be backed by people who were members of the Chamber. We didn't try to get any particular church group, or the ministerial association. We tried to get the people, the individuals. We wound up with practically everybody's endorsement.

**Q.** Apparently this was a new tack for your district. Is that right?

**A. (HENDRICKSON):** That's right, in previous elections, citizens committees were organized and often they, themselves, were not in accord on what they wanted. In another election that failed, we were backed by the Chamber of Commerce. In this last one, we took the thing in our own hands and all of the campaign was directed by the administrator and the board. We asked certain groups, like the PTA and the Chamber of Commerce, and other people who were influential in the district, to work. But each and every effort was handled directly from the school board table. These groups cooperated very well, that way. We had board members out making speeches. We had the school officials speak. Even the students were working. We had a chain going, and it worked. We had one head, and he in turn called on the board members, and they went to work on the different organizations.

**Q** **Mr. Mann, you were sort of an outsider on this picture. What do you think was the strong point in this campaign?**

**A. (MANN):** I believe that the major item was the new personality—the new superintendent. He was fresh, he had good ideas, he worked hard and he certainly knew how to influence the more influential members of the community.

**Q.** Mr. Hendrickson, you were the first one to mention this factor of personality . . . the personality of the superintendent. Would you say that he'll be able to work as effectively in a campaign two years from now? Would his popularity be as strong? Or is it the newness that counts?

**A.** I would say that he—or any

"We must have the need before we can pass a bond issue." Lillibridge





"We are trying to get some direct contact with what is happening in the classrooms."

**Hendrickson**

superintendent should be stronger in the next election than in the past one, because he is better known and better liked. Newness helps but that isn't the big thing.

★ ★ ★

**Q** A little while ago you mentioned that Corona's population growth was caused by industry moving in. What's the attitude of these new firms who are going to be paying a good chunk of the bill for new schools?

**A. (LILLIBRIDGE):** Let me answer it this way. The manager of our new furniture factory, which employs about 300 men, has not only volunteered, but has on several occasions offered the company's services in any way possible to help promote more bonds for schools. In other words, they want schools. That is one of the first things a lot

of industries ask about. That question "how can we help the schools" has been asked recently by an outfit which is spending five million dollars and is very much concerned about our school situation. It has offered to help.

**Q. Have you accepted that offer?**

**A. No.** Up to now we haven't had

to, because we were lucky in our last election. But it is possible that we might call on them, if they are still in a receptive mood, in other elections to follow.

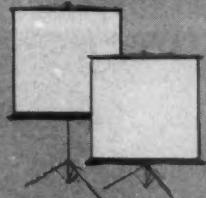
**Q. Is there any reason why you wouldn't want to call on them?**

**A. (MERRIHEW):** I don't think so. I'm sure they would help financially

"It's the rare community that will shell out money to stay ahead."

**Mann**



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40"x40"	39.50			36.95	28.95	25.95	6"x8'	129.00	70.00	\$219.00	\$ 99.00
37"x50"		\$35.00	\$21.50	41.95	33.95	29.95	8"x8'			225.00	107.00
50"x50"		38.00	25.00	45.95	36.95	33.95	7"x9"			230.00	111.00
45"x60"	CRD STAND	43.00	32.00		41.95	36.95	9"x9"			240.00	120.00
60"x60"	\$11.00	50.00	36.00		47.95	41.95	8"x10'			245.00	132.00
52"x70"		50.00	39.00		49.95	42.95	10"x10'			250.00	143.00
70"x70"		60.00	46.00		56.95	49.95	9"x12'			270.00	180.00
							12"x12"			280.00	199.00

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"Our meetings are open. We try to encourage community participation."

Hendrickson

"When you pass any bond election these days it's because you work hard . . . I talked to as many as five different groups in one day."

Merrihew

if they were called upon. In fact, they did help us financially on the cost of the last campaign. You see, no campaign expenses can be charged against the school district. So you have to promote funds for a campaign from outside sources.

**Q** **There are professional services available to school districts I believe to help them with bond issues. Have you ever used one?**

A. (HENDRICKSON): We have considered everything. Some of the very large districts have hired professional public relations people who come in and work with them. In a small community like ours, it might make people mad.

**Q. You don't think these people can work behind the scenes?**

A. (MERRIHEW): Not to any very great degree. I think the only assistance they can give is very specific technical help. In general, any outside influence that is brought into a campaign can backfire.

★ ★ ★

**Q** **What about future bond issues? Are you doing anything now to get ready to sell them to the public? Will you follow the same program?**

A. (HENDRICKSON): I think that in future elections it will be neces-



sary for us to try several methods. Methods that work one time may not work another time. It seems to me that we are going to have to gauge our public and sell our programs as best we can. I think we'll direct future campaigns in the same way, though.

**Q. Have you ever thought about using a citizens committee to do the job?**

A. (MERRIHEW): I think we're better off with an organized group which is in no way officially connected with the schools. In the past, there was enough dissension between members of the citizens committee that it became a factional operation. When this happens, it hinders the program and confuses the issues. Incidentally, I don't think that the superintendent

was necessarily at fault before—certainly not completely—or responsible for the success in this latest victory. It's true that some citizens committees in some communities have sold things that could not be sold by the school board or by the administrative staff. In other areas, they've failed.

**Q. From a superintendent's point of view, a citizens committee becomes just another power to be reckoned with. Is that true?**

A. (MERRIHEW): It's true that some citizens committees are hostile, and some groups do take up a sizeable chunk of the administrator's time. But that is not the purpose of the citizens committee. I don't think they are really citizens committees any longer when that occurs. When it does, I suspect it



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doesn't necessarily represent the general attitude of the complete citizens committee, but rather only a particular group that belonged to the committee. I don't think there is any substitute for strong direction, in an election, by the board and the administration.

**Q.** Are you doing anything else to get ready for the next bond issue?

**A. (MERRIHEW):** Our school board has had a very well organized campaign set up for a two-fold purpose. One purpose is to educate the board, itself. A board member can't be expected to be familiar with all the facts of school organization and school administration. So we spend every other school board meeting in an organized attempt to educate the board. The second purpose is to inform the public of our activities and, incidentally, of our needs. We have 100 or more spectators at our meetings who automatically undergo the same educational program. That will pay off in the future.

**Q**

**What do you mean by "educate the board"?**

**A. (HENDRICKSON):** Let me clarify that. What we are trying to do is get some direct contact with what is taking place in the classrooms. We have never known that before because we can't take time to go and visit all those classrooms. We have had eight or ten different demonstrations, in school board meetings, from different departments of the school. I personally have

learned more about what takes place in the system than I learned in all other ways before.

**Q.** You mean you actually have a classroom demonstration in the board meeting?

**A. (LILLIBRIDGE):** Yes. We organize a program on how we teach reading in Corona schools. Then when something like "Why Can't Johnny Read?" comes up, we have some factual answers. We know our children are taught properly. We can say that if a child can't read in Corona, it's probably because the apple falls close to the tree, and his parents probably can't read either. This program has been very popular.

**Q.** You say you have 100 spectators. Are all of your meetings open and well attended, or just these demonstrations?

**A. (HENDRICKSON):** Our meetings are all open—every single meeting. We try to encourage as much community participation as we can. We don't do it on a town meeting sort of basis, because we have too much work. But we do encourage visitors and questions. We don't always have 100 people there. You can get a mob at any time if people are mad at you, or if you have a special program, but not for routine business meetings.

**Q.** How often are these demonstration meetings held?

**A. (HENDRICKSON):** Every second meeting. We very often use a portion of the alternate meeting.



"Prices are going up from 4% to 10% a year." Mann

**Q.** Do you give these programs much publicity?

**A. (MERRIHEW):** We make sure the public knows about them. We are trying to work very closely with the papers at this time, and they help us. In the last five or six years, we had drifted away from the newspapers and had a lot of opposition on things. Now we do better groundwork and they cooperate when we need publicity or an article. It takes plenty of time, I might add, to do this properly. **END**



## How to keep your bond costs down

(Continued from page 27)

**1. When overall school costs are lower than they will be later, and so tend to stabilize the overall tax rate?**

**2. When the best selling maturities are the early ones, and so keep the interest rate and interest costs as low as possible at the time of sale?**

In Table 2 you can see what happens when we reverse the shorter maturity schedule of Table 1, in comparison with the conventional longer issue, to see how we might meet the above situation. This time, we estimate the interest rate at 3.9%, or 0.1% below the shorter issue of Table 1. We find, besides saving an additional \$107,000, due partly to the lowered interest rate and partly to the more rapid payment of principal, this maturity schedule has the additional merit of reducing principal and interest payments as school costs are rising.

### Set up a reserve fund

Now let us assume that this district can look ahead five years before it has to build. What can be expected if its taxpayers will set up a *capital reserve fund* of \$100,000 a year for these five years? At the end of the five years the district will have \$500,000, plus \$30,000 if invested in an interest account at 3% simple interest. The bond issue then would be for \$970,000 for the \$1,500,000 building. Let us set up a twenty-year maturity schedule in Table 3, compared to the conventional issue in Table 1. We shall assume the same interest rate, for it is at present impossible to assess the effect of a capital reserve fund. However, it is expected that it would either reduce the interest rate somewhat, or increase the premium, or both, because such a fund

**1. Is evidence of foresighted planning, which potential investors like.**

**2. Will reduce the bonds to be sold in a "tight money" market.**

Even at that, it is seen that the \$500,000 capital reserve fund will accomplish the same as \$771,400 when compared to the parallel for the entire cost of the building. The net saving in interest costs is \$241,400, plus \$30,000 interest.

Similar results can be noted, even though the capital reserve fund is

smaller and is established over a shorter period of time.

Consequently, you can see that your board of education should do some careful financial planning if it is to achieve economies and an equitable distribution of the tax burden. "Although most school construction is financed by long-term borrowing, it is not the exclusive, nor . . . the most desirable method."<sup>1</sup>

"In every school district, the board's consideration and adoption of methods to strengthen its fiscal structure will help to reduce the burden of debt service charges. The best procedure in any one district will be largely dictated by existing circumstances after careful appraisal of the various factors [involved]. Policy decisions by the board of education . . . should be based on considerations of economy, and of fairness to the present generation and to future generations, without overburdening either but giving full justice to . . . educational needs."<sup>2</sup>

Furthermore, while you are considering means of reducing interest costs on construction issues, consider also the advisability of conserving your credit for those issues. You can do this by paying for relatively small items, such as new school buses, garage, sites, major repairs, and the like, *from current revenues* or with the help of capital notes.

In this way you save on interest costs for these items at the same time that you are conserving your credit for your construction issues. This helps you to reduce interest costs on the necessary bonds. Again, you should publicize this aspect of your financial planning in the bond brochure.

### Timing your bond issue

Another aspect of financial planning is timing the bond sale. There are several factors to consider:

**1. Ordinarily, you borrow money as you need it.**

<sup>1</sup> State of New York Commission on School Buildings, "More Schools for Your Money!"—The Finance Handbook.

<sup>2</sup> The Commission, Albany, 1954. p.

<sup>3</sup> *ibid.* p. 21.

**2. When building a school, you don't need it all at once. Your architect will prepare an anticipated cash flow plan, so you will know how much you need at any time.**

**3. Generally you can borrow for short periods by means of bond anticipation notes for less than the longer term bonds will cost you.**

**4. The bond market, like the stock market, has its ups and downs as well as its long term trends. You should have the advice of someone who knows the financial market, who knows when large issues are to be floated and who keeps track of the supply of bonds yet to come up for sale. He will be able to give you his professional opinion as to when it might be best for you to sell.**

I am reminded of one district which sold its bonds almost as soon as they were authorized, some time before the board knew what the actual cost of the building was going to be because the contractors hadn't yet had a chance to submit their bids. If the bids had come in under the estimates, you can see that this district would have borrowed money which it didn't need.

The board of education would have run no risks if it had followed this orderly procedure:

- Get the authorization from the people
- Get the contracts signed
- Use bond anticipation notes as needed
- Determine best schedule for district's interest in view of the market at the time of sale
- Sell bonds at best time.

### A word of caution

Market conditions for school bonds change from time to time. The spread between rates under various plans may increase or decrease. The situations illustrated under the three tables are typical, however, of how savings in interest costs may be made. Various combinations of tables, in accordance with the money market at the time of the proposed sale, should be drawn up for the board's consideration. The examples do not exhaust all possibilities.

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SCHOOL MANAGEMENT

# How long does it take to build a school?

SCHOOL PLANNING AND BUILDING HANDBOOK. *Engelhardt, Engelhardt and Leggett*. F. W. Dodge Corporation, New York. 626 pp. \$12.75.

■ ■ ■ HERE'S THE FIRST BOOK on schoolhouse planning that really lives up to its advance billing as a "practical handbook for laymen." If there's any one reason why it succeeds where others have failed, it's because the editors have concentrated on those aspects of construction that are important to a school board or an administrator, carefully avoiding the problems that are the particular business of the architect or engineer. If your district is building, don't fail to read it.

The "authors" are principals in a well-known edu-

tional consultant firm. Actually, they are editors, for each of the 40 carefully defined chapters has been written by a leading authority selected for his particular knowledge of a specific building problem. The overall result is a tight, non-repetitive work that gets down to hard facts.

The following excerpts from the chapter "Timetable for School Building Projects" is typical of the authors' down-to-earth approach:

## The timetable for School Building Projects

The phrase "time is of the essence" applies to most school building projects. Projects are often slow getting underway even though completed facilities are urgently

TABLE 35.1 Architects estimates of time required for planning a large secondary school

Architects <sup>1</sup>	A	B	C	D	E	F	G	H	I	J	K
	Time in months										
PHASE 1 Time between receipt of Board of Education requirements and completion of preliminary plans	2	2 to 5	2 to 3	1½ to 2	3 to 3½	5	2	5 to 6	2+	3+	2
PHASE 2 Between approval of preliminary plans and completion of working drawings and final specifications	5	5 to 8	5 to 6	4	3½ to 4	5 to 7	4 to 5	6	8 to 9	5	6
PHASE 3 Between approval of working drawings and receipt of contractors' bids	1	5 to 6	1	1	1 to 1½	1	1	1 to 1½	1	1	1
PHASE 4 Between acceptance of bid and completion of buildings	14 to 15	24	12 to 15	15 to 18	14 to 16	20	10 to 12	15 to 18	15 to 18	10 to 14	18
Total time	22 to 23	36 to 43	20 to 25	21½ to 25	21½ to 25	31 to 33	17 to 20	27 to 31½	26+ to 30+	19+ to 23+	27

<sup>1</sup>Eleven experienced school architectural firms participated in these estimates. The estimates may be considered minimal and not maximal.

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needed. Usually school executives wish to occupy new buildings in September, at the beginning of a school year. The time schedule for the many steps from initiation to completion of the project becomes an important guide, against which the progress of each step should be checked. . . .

### Adjusting time schedules

The timetable of a project may frequently require adjustment. Unforeseen delays disrupt the time schedule. Citizens' committees may seek more time than has been allotted to do their work. The reviewing bodies may have to devote their time to other services. The bond election may be unfavorable and thus require reconsideration of the entire program. A national emergency may arise or a local strike may tie up the works.

### Completed time schedule

Table 35.2 on this page presents a proposed time schedule readjusted by the architects after many months taken up with site problems, faculty and board of education conferences, preliminary sketches and preliminary budgeting. Slight changes may still be found necessary, but such a schedule enables the architects to plan the work of their staffs so that the major dates may be met.

TABLE 35.2 Estimated time schedule for proposed Great Neck Junior and Senior High School

Prepared November 1954 by LaPierre, Litchfield and Partners

	Date	Year
Referendum	Dec. 8	1954
Site preparation bid documents start	Dec. 15	1954
Preliminary architectural drawings for board approval	Jan. 24	1955
State Educational Dept. approval to be received	Feb. 7	1955
Site preparation bid documents Complete	Feb. 15	1955
Advertise for bids	Feb. 15	1955
Board approval	Feb. 21	1955
State approval	Feb. 25	1955
Issue for bidding	Mar. 1	1955
Receive bids	Mar. 15	1955
Let contracts	Apr. 1	1955
Break ground	Apr. 8	1955
Construction bid documents Complete	June 27	1955
Board approval	July 5	1955
Advertise for bids	July 6	1955
State approval	July 18	1955
Start bidding	July 20	1955
Receive bids	Aug. 23	1955
Let contracts	Sept. 15	1955
Substantial completion	July 1	1957

## NEW BOOKS LITERATURE

### Public relations program

SCHOOL PUBLIC RELATIONS, by *Leslie W. Kindred*, Prentice Hall, Inc., Englewood Cliffs, N. J., 1957, 428 pages.

Proceeding from the proposition that public relations is a necessary and natural function of a publicly supported institution, Professor Kindred writes a primer on the proper way to handle public relations.

He points out that while many school boards are undertaking public relations programs, few of them are doing it on a sound organized basis. In this book he proposes to point out the correct way.

Covered in the volume are such subjects as parent relations, organized community groups, school publications, staff relations and organization and administration of the school public relations program. If your school district needs a basic public relations orientation, this book may be the answer.

### Guide on school insurance

SCHOOL PROPERTY INSURANCE, EXPERIENCES AT STATE LEVEL, by *N. E. Viles, Sr.*, Government Printing Office, Washington, D. C. Paper bound, 1956, 61 pages. \$25

School insurance is an important factor in school administration yet few administrators have had the opportunity to make extensive studies in the field. Now the U. S. Department of Health, Education and Welfare has brought out a paper back book summarizing the experiences of the states and suggesting areas where improvements can be made in school insurance.

Crammed into this compact booklet are case histories including an important chapter on fire insurance and an intensive look at the insurance programs of five individual states.

School insurance has developed into a major administrative problem for many local school officials. Frequent questions are raised concerning insurance programs. Specifically there is interest in the make-up of insurance rates, the relationship of returns and costs to losses, the reasonableness of rates and the means of reducing them.

Here for the first time is a study that summarizes information on school insurance experiences and helps to give some important answers to these questions.

### Communications between districts

LET'S GET OUR SCHOOLS READY Now! National Citizens Council for Better Schools, New York City. Paperbound. 15 pages.

School needs are growing every day. Throughout the nation individual school systems are solving them, but, unfortunately, there is little intercommunication although the problems are similar.

This booklet serves as an introduction to what is going on in various school districts, shows that problems are basically the same everywhere and points up avenues that have been used successfully.

School administrators may find it useful for distribution to PTA's, citizens' councils, business and labor organizations.

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## Mid-year entrance dropped in Birmingham, Alabama

■ ■ ■ There will be no future mid-year entrance of pupils in the Birmingham, Alabama elementary public school system.

In adopting the new plan, the board of education announced that pupils now in school will continue with regular mid-year promotions as in the past. It further announced that a study will be made of the best way of handling problems during the transition period. Retarding or accelerating any groups of pupils will be avoided, the board said.

### No high school plan yet

"The board has eight years to work out whether it wants the same plan for high schools," Dr. L. Frazer

Banks, superintendent of schools, stated. He also said the national trend is to annual entrance and promotion. "This makes it increasingly difficult for pupils in the divisions entering in January to transfer to other school systems without loss. The mobility of population makes this of growing importance."

The plan will admit new beginning pupils 6 years old on or before October 1 in September only. It will postpone to the following September pupils who will be 6 between October 2 and February 1 of each school year.

"It will keep more, probably most, pupils with the same home room teacher for a school year rather than a semester," Dr. Banks said. "It will reduce, but not eliminate, the number of classes with two divisions. However, the tendency will be for these divisions to be a year apart rather than a half-year apart."

### Saves time and money

The plan will provide for a check up on promotions once a year rather than twice as at present, he said. About a week at mid-year formerly taken for this check up and promotion will be changed to regular teaching activities. This will also save much clerical work by teachers.

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SCHOOL MANAGEMENT



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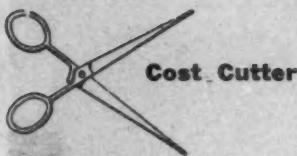
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## Louisville acts to curtail free lunch program

■ ■ ■ Faced with a 42% increase in the number of free lunches served during the September-April period of this year over the same span during 1955-56, the Louisville (Ky.) board of education is taking steps to check possible future increases.

It has voted to instruct the administrative staffs of all schools in the city

to "take the best means" to limit the number of lunches served. The board acted following a report from Fred Hess, director of pupil personnel in city schools, who revealed that the total of free lunches had jumped to 198,479 from 139,305 the year before. The new total, however, represented a decline from the 1954-55 high of 279,248.

Mr. Hess explained last year's drop this way: in 1954-55, the question of approving free lunches was left up to the judgment of the individual school principal, whereas last year Mr. Hess took over the entire program and "set up a careful influence in getting people to stand on their own feet." In 1956-57 approval of applications was once again returned to the principals.

Applications for free lunches are submitted by parents who are asked to

reveal their monthly incomes and to tell how many children there are in the family. Visiting teachers—most of whom are former classroom teachers—check on such applications, along with their other responsibilities of checking on reasons for absence or tardiness, health, retardation, etc. It is believed that this year's marked increase resulted from a curtailment of the visiting teacher program and a subsequent inability to check properly on all applications.

Net cost to the city of this year's free lunch program has been quoted by Mr. Hess at \$49,620, as compared with \$34,326 last year and \$69,812 in 1954-55. The program is supported, at least in part, by profits from the city's over-all school lunch program in which a plate lunch, including milk, is sold to those children whose families can pay, for 25¢.

According to Mr. Hess, the program is based on the philosophical concept that "a child must eat." The child's interest comes first, he believes, but every effort must be made to develop a family's stamina, in its own interest.

It has been estimated that about one-half cent out of each 25¢ lunch plate goes to support the program.

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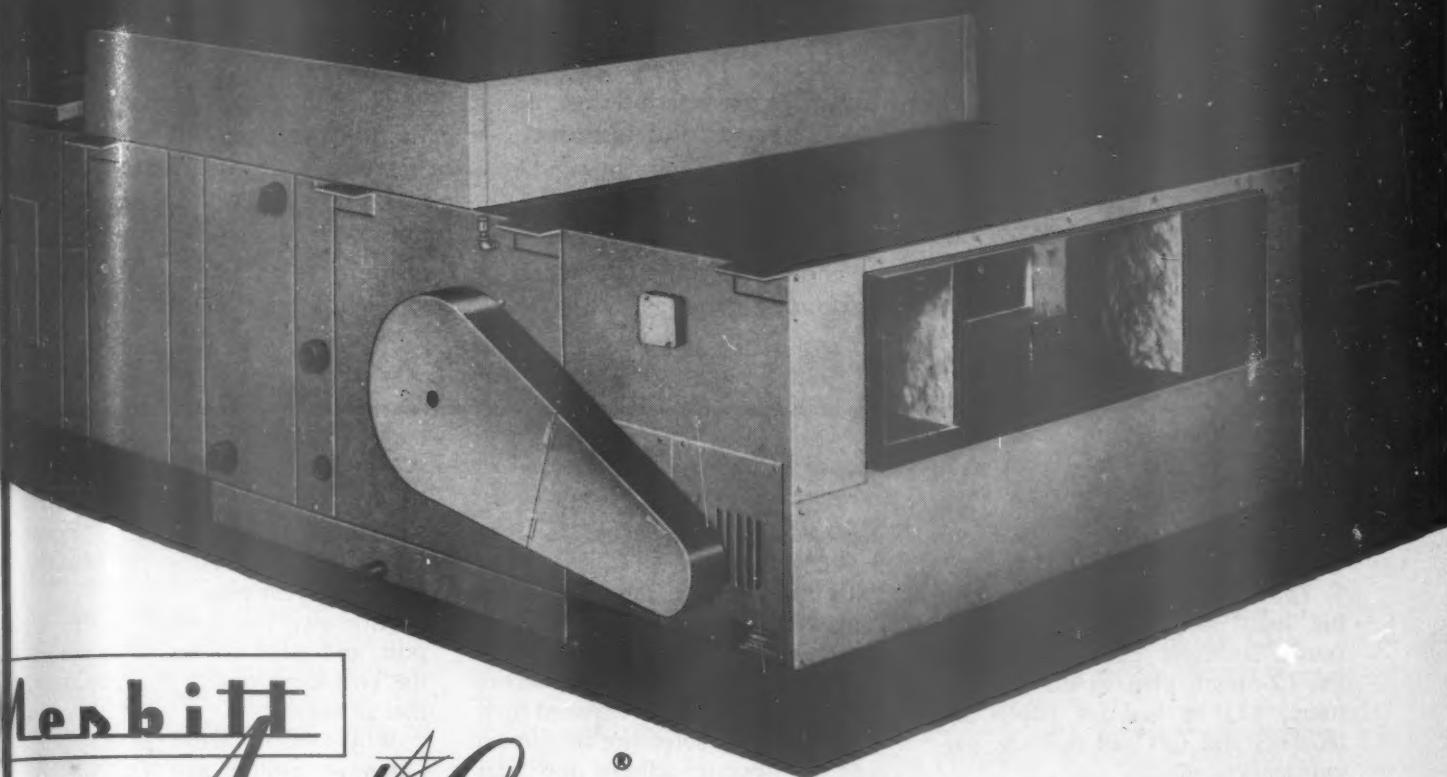
## Cost plus \$50,000 to build new school

■ ■ ■ In Williamson County, Tenn., the board of education recently awarded a contract for their new high school to a contractor on a cost plus \$50,000 agreement. According to the board, the arrangement, though unusual, will save money. They base their claim on a similar deal made in recent years on an addition to another school in the area. It is expected that the new school will cost about \$750,000.

The same contractor has built six other projects for the board in the last few years, and saved an estimated \$100,000 by avoiding the standard competitive bidding basis. According to the builder, the board saves money because of his ability to buy materials at wholesale and in quantity.

A spokesman for the state department of education says that cost-plus contracts are rarely used in Tennessee, although some projects were let that way right after the war when materials were in short supply.

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## The 12 month school year

(Continued from page 25)

# PRO

- Buildings and equipment do not stand idle part of the year.
- Fewer buildings are needed thus reducing debt service and insurance costs.
- Fewer textbooks are needed at any one time.
- A better chance to make up work lost by extended absence.
- The work of the pupil is evaluated more often than under the nine-month plan.
- In pupil progress in health and achievement, the advantage appears to be with the four-quarter plan.
- Considerable economy in the school budget has been established.

months and got in even deeper than intended.

The conclusions added up to a big, loud "No!" The committee report's strongest points were that the 12-month plan would (1) cost more, (2) be bad for pupils and teachers and (3) suit nobody, parents least of all.

"We don't want to give the impression that educators are inherently opposed to the plan," says Dr. Douglas G. MacRae, assistant superintendent of Fulton County schools and chairman of the Fulton group on the joint committee.

"Each system's committee worked separately on the study in terms of the impact of the plan on

**In the Ambridge, Pa., Schools, although teachers considered the program a success, they also felt a decline in student-teacher relationships. In particular, they said there was a loss of instructional time because of school re-organization every three months.**

the individual system, and the three chairmen met together often," he says. "The joint committee went into the broader questions.

"While our separate findings differed in some details, there were surprising areas of agreement. We went into the subject thoroughly and, I think, fairly. But our find-

ings were unmistakable in their meaning."

By far the most tangible finding concerned cost. The committee found it would actually be cheaper for every one of the three school systems to build the required new classrooms for increasing enrollment than to operate schools the year around.

Construction costs for new plants were figured on the basis of annual payments to amortize bonds according to practices now used in each system. Other factors taken into consideration for the sake of comparison were transportation, operations, maintenance, instruction, air-conditioning, fixed charges such as insurance, and teacher retirement payments.

For Atlanta, the biggest system, with 109,000 students, here is the way estimated additional costs stacked up:

	12-Month Plan	New Plants
New plants .....		\$1,237,000
Transportation ..	(The city provides none)	
Operations .....	\$215,000	\$626,000
Maintenance .....	204,000	159,000
Instruction .....	7,011,000	5,387,000
Air-conditioning ..	1,319,000	.....
Fixed charges ..	2,000	32,000
Teacher retirement ..	53,000	176,000
Total .....	\$8,804,000	\$7,617,000

For Fulton County, the added costs for new plants figured up to \$2,098,800, as against \$2,772,500 for the 12-month plan. The De-

Kalb calculation was \$1,714,000 for new plants against \$2,280,000 for the all-year plan.

Any way you looked at the report and tried to tear it apart in the cost department, the educators had an answer.

Why so much more for transportation in Fulton and DeKalb? A new building, said the committee, lowers transportation costs because it puts a school closer to pupils.

Why the bigger item for maintenance? Well, it costs more to keep up an old plant than a new one. And the labor costs would zoom. Most maintenance now takes place during the summer vacation, when the labor can keep regular hours. With school going the year around, they'd have to work at night and on week ends, and draw premium wages, or else work during school hours and disrupt things.

And instruction? You couldn't just get by with paying teachers more for teaching 12 months a year. Some of them won't want to do it at any price. At least 10 per cent more teaching services would be required, it was estimated.

### Is air-conditioning essential?

The air-conditioning proposition caused many a raised eyebrow when the report came out. This seemed like a frill to end all frills. Not so, Dr. MacRae declared in a supplementary report to the Fulton County Board of Education.

"We do not hesitate to say that

air-conditioning for a regular summer session of school in this climate is an imperative," he said. "The standardized and accepted temperature for a favorable learning situation is 68-72 degrees. The average summer temperature during classroom hours in our climate is from 10 to 15 degrees higher."

The joint committee report was just as positive. "If all students are to have equal educational opportunities, air-conditioning is necessary for a regular summer session in this climate," it said.

Air-conditioning price tags were figured on estimates of cost per square foot of existing buildings, with the total to be amortized over a 10-year period.

Fair though they tried to be, the joint committee devoted three and a half times more space in its report to "disadvantages" than to "advantages." They apparently were just doing what comes naturally, though, for the reasons against the 12-month plan poured out with no mincing of words.

### The No. 1 disadvantage:

"The most obvious disadvantage, and that which has generated intense public disapproval wherever the plan has been tried, is the inconvenience the plan works on the individual family. Vacation plans and other normal routines and schedules of the family are thrown into confusion when the children

of the family are scheduled for different school terms and different vacation periods. And it is manifestly impossible to schedule all children in a given family for the same nine months of school each year and the same vacation period. Even if it were not impossible, it would be altogether unfair."

School and vacation periods, whatever they were, would almost have to be fixed and inflexible, the committee contended, or some pupils might come up with a six-month vacation and others with interrupted school terms of three or six months. Bad either way, said the report.

And classes would be sorely handicapped where there were fewer than four sections of a given grade, the educators said. A teacher could have some pupils with six months in the grade, some with three and some just entering. Scheduling and administrative problems, both at elementary and high school levels, would be "complex and intricate."

Outside the schools, the committee saw all sorts of dire things happening. Community vacation and employment practices disrupted. Civic and church programs upset. Pupils on vacation—and 25 per cent would be all the time—luring pupils in school away to play hooky.

And last, but not least to some students—high school athletics would suffer because some students

might not attend school during the season of their favorite sports.

Under the list of advantages, the educators conceded that the 12-month plan would make fewer classrooms serve more pupils and that subjects taught by the problem-solving method could be taught just as well as under the nine-month plan. Some other points:

A child could enter at the beginning of the quarter nearest his sixth birthday, and elementary pu-

**The Council of State Government's Report on Education concludes, ". . . too many problems are apparent in connection with a regular, year-round plan, staggered or non-staggered, to permit its nationwide adoption. But, in the view of numerous authorities, some round-the-calendar system is well worth experimental adoption within certain areas or certain states."**

pils might be more easily kept back or accelerated under the quarter plan, the report said. Teachers wouldn't have to look for outside work if they taught for 12 months, and they might be able to take some college courses usually not offered in the summer.

But the committee was not swayed. It wound up with these "observations and conclusions":

"1. The plan is not new. It has

- Difficult to carry on maintenance, repairs, painting, cleaning, etc.
- Frequent change of teachers on account of vacations, leaves, etc.
- Not possible to keep four groups in same grade intact in small schools.
- Too much pupil time is wasted at the end of each quarter and the beginning of the next one.
- Many pupils and teachers are forced to take their vacation at an undesirable time of year.
- Administrative and supervisory work is greatly increased.
- Difficult to properly adjust pupil transfers from outside the district and for pupils to transfer to a nine-month school in another district.

# CON